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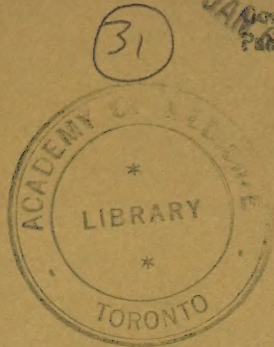


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# *Annual Report*

THE DEPARTMENT OF NATIONAL HEALTH AND WELFARE



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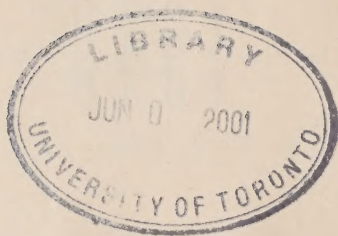


THE DEPARTMENT OF NATIONAL HEALTH AND WELFARE  
ANNUAL REPORT  
FOR THE FISCAL YEAR ENDED MARCH 31

1949

EDMOND CLOUTIER, C.M.G., B.A., L.Ph., KING'S PRINTER AND CONTROLLER OF  
STATIONERY, OTTAWA, 1949





BDE-3407

To *His Excellency Field Marshal the Right Honourable The Viscount Alexander of Tunis, K.G., G.C.B., G.C.M.G., C.S.I., D.S.O., M.C., LL.D., A.D.C., Governor-General and Commander-in-Chief of the Dominion of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

The undersigned has the honour to present to Your Excellency the Annual Report of the Department of National Health and Welfare for the fiscal year ended March 31, 1949.

Respectfully Submitted, .

PAUL MARTIN,  
*Minister of National Health and Welfare.*

April 1, 1949.

JAN 6 1950





HISTORY-MAKING special meeting of the DOMINION COUNCIL OF HEALTH to discuss application of the government's new \$31,000,000-a-year NATIONAL HEALTH PROGRAMME. At Ottawa,

in June 1948, these representative federal and provincial health officers heard of the scope and promise of the plan from Hon. Paul Martin, Minister of National Health and Welfare.



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# DEPARTMENT OF NATIONAL HEALTH AND WELFARE

## MINISTER

HONOURABLE PAUL MARTIN, K.C., P.C., M.P., M.A., LL.M., LL.D.

DEPUTY MINISTER OF NATIONAL HEALTH AND WELFARE (HEALTH)  
G. D. W. CAMERON, M.D., C.M., D.P.H.

DEPUTY MINISTER OF NATIONAL HEALTH AND WELFARE (WELFARE)  
G. F. DAVIDSON, B.A., M.A., Ph.D.

## HEALTH BRANCH

*Director of Health Services,*  
H. A. ANSLEY, M.D., D.P.H.

*Assistant Director of Health Services,*  
F. S. PARNEY, M.D.

*Chief, Blindness Control Division,*  
J. H. GROVE, M.D.

*Chief, Child and Maternal Health Division,*  
ERNEST COUTURE, M.D., C.M.

*Chief, Civil Aviation Medicine Division,*  
H. E. WILSON, M.D.

*Chief, Civil Service Health Division,*  
R. G. RATZ, M.B.

*Chief, Dental Health Division,*  
H. K. BROWN, D.D.S., D.D.P.H.

*Chief, Epidemiology Division,*  
A. F. W. PEART, M.B.E., M.D., C.M.,  
D.P.H.

*Chief, Hospital Design Division,*  
H. G. HUGHES, B.Arch., A.R.I.B.A.,  
M.R.A.I.C.

*Chief, Industrial Health Division,*  
K. C. CHARRON, M.D.

*Chief, Industrial Health Laboratory,*  
K. KAY, M.A., Ph.D.

*Chief, Laboratory of Hygiene,*  
J. GIBBARD, B.S.A., M.Sc.

*Chief, Mental Health Division,*  
C. G. STOGDILL, M.A., M.D.

*Chief, Narcotic Control Division,*  
K. C. HOSSICK

*Chief, Nutrition Division,*  
L. B. PETT, B.S.A., M.A., Ph.D., M.D.,  
F.C.I.C.

*Chief, Public Health Engineering Division,*  
J. R. MENZIES, B.A.Sc., O.L.S., C.E.

*Chief, Quarantine, Immigration Medical  
and Sick Mariners Services,*  
H. D. REID, M.D.

*Chief, Venereal Disease Control Division,*  
B. D. B. LAYTON, M.D..

*Director of Health Insurance Studies,*  
F. W. JACKSON, M.D., D.P.H.

*Assistant Directors of Health Insurance  
Studies,*  
M. LANGLOIS, M.D.  
G. E. WRIDE, M.D., D.P.H.

*Director, Food and Drug Divisions,*  
C. A. MORRELL, M.A., Ph.D., F.R.S.C.

*Assistant Director, Food and Drug  
Divisions,*  
A. PAPINEAU-COUTURE, B.A.

*Chief, Inspection Services,*  
R. D. WHITMORE, O.B.E., F.C.I.C.

*Chief, Laboratory Services,*  
L. I. PUGSLEY, B.A., M.Sc., Ph.D.

*Chief, Proprietary or Patent Medicines  
Division,*  
L. P. TEEVENS

*Director, Indian Health Services,*  
P. E. MOORE, M.D., D.P.H.

*Assistant Directors of Indian Health  
Services,*  
W. L. FALCONER, M.D.  
H. A. PROCTOR, M.D.  
O. LEROUX, M.D.

DIRECTORY OF PERSONNEL (Continued)

WELFARE BRANCH

*National Director of Family Allowances,*  
R. B. CURRY, B.A., LL.B.

*Director, Old Age Pensions Division,*  
J. W. MACFARLANE

*Acting Chief, Physical Fitness Division,*  
DORIS W. PLEWES, M.A., B.Paed,  
Ed.D.

*Director, Voluntary War Relief Division,*  
P. L. BROWNE, M.C., F.C.G.S.,  
E.D.(F).

*Registrar, War Charities Division,*  
L. TREBERT

ADMINISTRATION BRANCH

*Departmental Secretary,*  
MISS O. J. WATERS

*Director, Information Services Division,*  
C. W. GILCHRIST, O.B.E., E.D.,

*Chief, Legal Division,*  
R. E. CURRAN, B.A., LL.B.

*Librarian,*  
MISS M. D. MORTON, B.H.Sc., B.L.S.

*Chief, Personnel Division,*  
J. C. RUTLEDGE, B.Com.

*Acting Chief, Purchasing and Supply  
Division,*  
J. A. HICKSON

*Acting Chief, Research Division,*  
J. W. WILLARD, M.A., M.P.A., A.M.

---

*Chief, Translation Office,*  
G. A. SAUVE

*Chief Treasury Officer,*  
T. F. PHILLIPS

# DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS

## ADMINISTRATIVE OFFICES

Ottawa—Jackson Building

## HEALTH BRANCH

### FOOD AND DRUG LABORATORIES

Ottawa—35 John Street  
Halifax—Dominion Public Building (P.O. Box 605)  
Montreal—379 Common Street  
Toronto—59 Victoria Street  
Winnipeg—Aragon Building, 244 Smith Street  
Vancouver—Federal Building, 325 Granville Street

### IMMIGRATION MEDICAL SERVICE OFFICES

#### *Canada*

Gander—Gander Airport  
Halifax—Immigration Building, Pier 21  
North Sydney—Immigration Building  
Saint John—Quarantine Hospital (P.O. Box 1406)  
Quebec—Savard Park Immigration Hospital  
Montreal—Immigration Building, 1162 St. Antoine Street  
Victoria—Immigration Building

#### *Overseas*

London—42-46 Weymouth Street, Marylebone, W.1  
The Hague—Canadian Embassy  
Brussels—Canadian Embassy  
Paris—Canadian Embassy  
Rome—Canadian Embassy

### INDUSTRIAL HEALTH LABORATORY

Ottawa—35 John Street

### LABORATORIES OF HYGIENE

Ottawa—45 Spencer Street  
Kamloops, B.C.

### PUBLIC HEALTH ENGINEERING DISTRICT OFFICES

Moncton—General Motors Building  
Montreal—379 Common Street  
St. Catharines—4th Floor, Dominion Building  
Port Arthur—Room 1, Customs Building  
Winnipeg—207 Scientific Building, 425½ Portage Avenue  
Regina—P.O. Box 487, 413 Post Office Building  
Edmonton—302 Williamson Building  
Vancouver—321 Federal Building, 325 Granville Street

### QUARANTINE STATIONS

Halifax—Rockhead Hospital  
Saint John—Quarantine Hospital (P.O. Box 1406)  
Quebec—Louise Basin and Savard Park Immigration Hospital  
Montreal—379 Common Street  
Vancouver—Immigration Building  
Victoria—William Head, B.C.

### SICK MARINERS CLINICS AND HOSPITALS

Halifax—Immigration Building, Pier 21  
Sydney—Marine Hospital  
Lunenburg—Marine Hospital  
Saint John—Quarantine Hospital  
Quebec—Louise Basin  
Vancouver—Immigration Building

### INDIAN HEALTH SERVICES

#### *Hospitals*

Prince Rupert, B.C.—Miller Bay Indian Hospital  
Nanaimo, B.C.—Nanaimo Indian Hospital

## DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS—Continued

Sardis, B.C.—Coqualeetza Indian Hospital  
 Morley, Alta.—Stoney Indian Hospital  
 \*Cardston, Alta.—Blood Indian Hospital  
 Brocket, Alta.—Peigan Indian Hospital  
 Gleichen, Alta.—Blackfoot Indian Hospital  
 Edmonton, Alta.—Charles Camshell Indian Hospital  
 Fort Qu'Appelle, Sask.—Fort Qu'Appelle Indian Hospital  
 North Battleford, Sask.—North Battleford Indian Hospital  
 Hodgson, Man.—Fisher River Indian Hospital  
 Pine Falls, Man.—Fort Alexander Indian Hospital  
 †Selkirk, Man.—Dynevour Indian Hospital  
 †The Pas, Man.—Clearwater Lake Indian Hospital  
 †Brandon, Man.—Brandon Indian Hospital  
 Norway House, Man.—Norway House Indian Hospital  
 Port Arthur, Ont.—Squaw Bay Indian Hospital  
 Manitowaning, Ont.—Manitowaning Indian Hospital  
 Ohswéken, Ont.—Lady Willingdon Indian Hospital  
 \*Perth, N.B.—Tobique Indian Hospital

*Nursing Stations*

Coppermine, N.W.T.	Nelson House, Man.
Fort Good Hope, N.W.T.	Little Saskatchewan
Fort McPherson, N.W.T.	(Gypsumville), Man.
Fort Norman, N.W.T.	Cross Lake, Man.
Port Simpson, B.C.	Osnaburgh House, Ont.
Driftpile, Alta.	Lac Seul, Ont.
Lac la Ronge, Sask.	Fort George, Que.
Broadview, Sask.	Bersimis, Que.
Island Lake, Man.	Eskasoni, N.S.
Oxford House, Man.	

*Health Centres*

Pangnirtung, N.W.T.	Hobbema, Alta.
Fort Smith, N.W.T.	Punnichy, Sask.
Fort Resolution, N.W.T.	Prince Albert, Sask.
Chesterfield Inlet, N.W.T.	Pine Falls, Man.
Aklavik, N.W.T.	The Pas, Man.
Whitehorse, Y.T.	God's Lake, Man.
Teslin, Y.T.	Sarnia, Ont.
Carmacks, Y.T.	Muncey, Ont.
Williams Lake, B.C.	Deseronto, Ont.
Prince Rupert, B.C.	Seven Islands, Que.
Vancouver, B.C.	St. Regis, Que.
Lower Post, B.C.	Port Harrison, Que.
Kincolith, B.C.	Caughnawaga, Que.
Kamloops, B.C.	Mistassini, Que.
Hazelton, B.C.	Waswanipi, Que.
Alert Bay, B.C.	Maniwan, Que.
Wabasca, Alta.	Obedjiwan, Que.
Saddle Lake, Alta.	Lennox Island, P.E.I.
	Fredericton, N.B.

\*Departmental hospitals staffed by religious orders on stipend.

†Departmental sanatoria staffed and operated by the Sanatorium Board of Manitoba, with reimbursement on a per diem basis.

## WELFARE BRANCH

## FAMILY ALLOWANCES REGIONAL OFFICES

St. John's—17 Buckmasters' Field  
 Charlottetown—59 Queen Street  
 Halifax—Industrial Building  
 Fredericton—City Hall  
 Quebec—51 Boulevard des Capucins  
 Toronto—122 Front Street West  
 Winnipeg—Lindsay Building  
 Regina—Saskatchewan Motors Building, Broad Street  
 Edmonton—10201, 100th Street  
 Victoria—Weiler Building

To *The Honourable Paul Martin, K.C., P.C., M.P., M.A., LL.M., LL.D.,  
Minister of National Health and Welfare, Ottawa.*

SIR,- We have the honour to present, herewith, the Annual Report of the Department of National Health and Welfare for the fiscal year ended March 31, 1949.

Respectfully Submitted,

G. D. W. CAMERON,  
*Deputy Minister of National Health  
and Welfare (Health),*

G. F. DAVIDSON,  
*Deputy Minister of National Health  
and Welfare (Welfare).*

OTTAWA.

April 1, 1949.

# HEALTH BRANCH

Several events of the past year resulted in a substantial increase in the work of the Health Branch of the Department, to which is assigned responsibility for all federal health activities except those associated with the care of veterans and members of the armed forces.

Most notable occurrence of the year was the introduction, in May 1948, of the NATIONAL HEALTH PROGRAMME by which the federal government agreed to make available to the provinces, by way of grants-in-aid for specific health purposes, an amount of approximately \$31,000,000 annually. Details of this programme will be found in the report, which follows, of the Directorate of Health Insurance Studies, under which the programme is administered.

The Department was fortunate in securing the services of Dr. F. W. Jackson, of the Department of Health and Public Welfare of Manitoba, as head of the Directorate.

As far as was possible, arrangements were made to have technical assistance, in connection with administration of the health programme, provided through the appropriate divisions already existing in the Department, such as the Mental Health Division, Venereal Disease Control Division, Research Division, etc. Also, where possible, consultation and advice were sought from national voluntary associations, such as the Canadian Tuberculosis Association, the National Cancer Institute, etc. By working in this way, the Department felt it could achieve the most effective use of the money available and, at the same time, keep administrative machinery to a minimum.

Consideration of matters of policy regarding the terms and conditions under which the grants would be made available involved a considerable portion of the time of the senior departmental officials in discussions and meetings with provincial officials, both in Ottawa and through visits to the provinces.

## *Special Meetings*

In order to determine and clarify purposes for which the money might be expended, and to assure the most effective use of as much of it as possible during the fiscal year, more than the usual number of meetings were held with provincial officials.

Immediately following the announcement of the Programme, a special meeting of the *Dominion Council of Health* was convened. Two further meetings of the Council were held during the year, substantially the whole of which were devoted to consideration of matters in connection with the grants.

The Advisory Committee on Mental Health and the Dominion-Provincial Conference of Venereal Disease Control Directors also held special meetings to discuss ways and means of achieving the most effective utilization of the National Health Grants in their respective fields. In addition, due to the importance attached to the health survey aspect of the Programme, as provided for by the Health Survey Grant, a meeting of *Provincial Survey Directors* was convened in November 1948, to permit an opportunity for round-table discussion of the nature and extent of the survey and methods for conducting it.

At the same time, representatives of certain health professions (doctors, nurses, public health workers and hospital administrators) were invited to present the views of their respective organizations regarding the scope of the survey, having in mind the announcement of the Prime Minister, which stated that the Programme

constituted the logical first step in any hospitalization or medical care undertaking.

Other meetings of federal and provincial officers held during the year included the Technical Advisory Committee on Public Health Laboratory Services, the Dominion-Provincial Nutrition Committee, and a Dominion-Provincial Conference on Health Education.

### *Voluntary Agencies*

Since they continued to make significant contributions to the preservation and improvement of public health, voluntary health agencies were again supported during the year by grants, and the Department continued its endeavours to ensure the greatest possible amount of coordination of efforts of these agencies with those of the official health departments.

### *Newfoundland*

Preparation for the entry of Newfoundland into Confederation occasioned great interest in the public health field and considerable effort was expended by the Department, particularly in those divisions concerned with the administration of such statutory responsibilities as Food and Drugs control, Narcotics control, Quarantine, etc., and in connection with the extension of the grants-in-aid programme to the new province.

### *World Health*

Active participation in international health matters was maintained during the year. The Department, in consultation with the Department of External Affairs, advised regarding official Canadian participation at international health gatherings and, where official representation was considered necessary and desirable, made recommendations regarding composition of the delegations.

In May and June, the Deputy Minister of National Health and Welfare (Health), headed the Canadian Delegation to the Fifth Session of the Interim Commission of the World Health Organization, and to the First World Health Assembly, in Geneva.

Other meetings to which the Department sent official delegates during the year were: the International Conference for the Sixth Decennial Revision of the International List of Diseases, Injuries and Causes of Death, held in Paris in April, the International Congress on Mental Health, held in London, in August, the Third Session of the P.E.L. Division of the International Civil Aviation Organization, in Washington, and the Joint Canada-United States Air Facilitation Committee, in Bermuda.

At home, in addition to its primary health functions, the Department continued to provide technical advice on medical and related matters to other federal departments and agencies, including the Department of Mines and Resources, the Department of Fisheries, the Secretary of State, the Civil Defence Board, the Dominion Bureau of Statistics, etc.

## DOMINION COUNCIL OF HEALTH

Announcement of the National Health Programme posed many problems requiring immediate consultation with the provinces. The logical channel for such liaison was the Dominion Council of Health, which is provided for under the National Health and Welfare Act, 1944, and which consists of the Deputy Minister of National Health, as Chairman, the chief executive officer of each of the provincial Departments of Health, and five additional persons appointed by the Governor-in-Council.

Primary function of the Council is the furnishing of advice to the Minister of

National Health and Welfare in respect to federal health responsibilities and national health problems, though, at the same time, it serves as the focal point through which federal-provincial co-operation and co-ordination of effort is attained. As such, it has played a very prominent part in the development of public health services throughout the country, and the attainment of the leading position which Canada enjoys in the sphere of public health may largely be credited to its influence.

At a special meeting of the Dominion Council of Health called early in June, 1948, grants provided for under the National Health Programme were discussed in detail and consideration was given to the terms and conditions governing payment of the funds made available by Orders-in-Council.

Hon. Paul Martin, Minister of National Health and Welfare, attended the special meeting and outlined the government's hopes for the widest possible use of the new federal grants to the advantage of Canadians and to the general advancement of the country's health services.

Two further meetings of the Dominion Council of Health were held during the year, the 55th Meeting in November and the 56th Meeting in March. Both these meetings were devoted almost entirely to matters related to the administration and utilization of the health grants, clarification of interpretation of purposes for which the monies might be expended, agreement on standards and definitions, where necessary, and discussion and inter-change of ideas and methods of developing new or extended programmes for achieving the most effective use of the new resources provided.

---



## HEALTH SERVICES

For administrative advantage, all the health divisions of the Department, excepting those protecting the public in the fields of consumables and pharmaceuticals, the special services providing for the health of Indians and Eskimos and the staff studying health insurance and presently applying the new federal grants to the provinces, were brought this year into a coordinated group of Health Services.

Dr. H. A. Ansley was appointed Director of Health Services, with Dr. F. S. Parney as Assistant Director. Dr. C. P. Brown, also an Assistant Director of Health Services, retired after many years of valuable public service.

Detailed reports follow of the work during the past year of the divisions of the Health Services, which are: Blindness Control, Child and Maternal Health, Civil Aviation Medicine, Civil Service Health, Dental Health, Epidemiology, Hospital Design, Industrial Health, the Laboratory of Hygiene, Mental Health, Narcotic Drug Control, Nutrition, Public Health Engineering, the Quarantine, Immigration Medical and Sick Mariners Services and Venereal Disease Control.

---

### BLINDNESS CONTROL



Of approximately 16,000 persons registered as blind in Canada by the Canadian National Institute for the Blind, 8,476 were in receipt of pensions for blindness, at March 31, 1948, in accordance with relevant provisions of the Old Age Pensions Act.

During the year 2,372 new applications for pension for blindness were received by the Blindness Control Division. Of these 1,298 were approved, on the basis of reports submitted by oculists approved by the Department. A further 321 applications were approved for pension on reports submitted by the Canadian National Institute for the Blind. Of the applicants, 777 were found to be not visually eligible for pension, according to departmental examinations.

The total number of persons found visually eligible for pension in the fiscal year was 1,519. However, due to the death of pensioners or their removal from pension rolls for financial or treatment reasons, the actual increase in the total number of pensioners was 1,091 bringing the total pensions in force at March 31, 1949 to 9,567.

It is interesting to note that the percentage of blind pensioners to total population varies considerably according to provinces. The percentages of blind pensioners in the various provinces were: Alberta .049; British Columbia .054; Manitoba .066; New Brunswick .199; Nova Scotia .138; Ontario .048; Prince Edward Island .131; Quebec .093; Saskatchewan .053 and Northwest Territories .008. The higher percentages in the Eastern provinces is believed to be due to the fact that there are actually more old people there, and, accordingly, a higher percentage of senile cataract and glaucoma. Also, in some areas, there is little infusion of new blood stock and intermarriage of blood relatives having hereditary eye defects is too frequent. It must also be admitted that, in areas where the percentage is high, medical services for such people are not yet adequate.

### *Sight Conservation*

While, from its inception, the main function of this Division has been to cooperate with the Welfare Branch of the Department and with Provincial authorities in the administration of pensions for the civilian blind, by arranging oculists' examinations and making final rulings as to visual eligibility for pension, it has always been the division's aim to extend its work so that some practical progress could be made in the preservation of vision. It has endeavoured to so direct its efforts that a great deal of unnecessary blindness might be prevented and the visual needs of the public adequately met, from a public health standpoint.

Main difficulties in this regard arise from the fact that most public health activities are on a provincial level and the Department, usually, can only advise. However, the situation has changed, somewhat, since the division was granted \$20,000, in 1947, for the purpose of conducting a treatment experiment among blind pensioners to ascertain what percentage of them might be helped, and removed from the pension rolls, by adequate medical treatment. So far, the provinces of Nova Scotia, New Brunswick and Quebec have agreed to take part in this experiment, which is administered by the provinces, and to the cost of which they contribute 25 percent.

A number of cataract extractions have been performed successfully and a satisfactory percentage of those operated upon have had vision restored sufficiently to be removed from the pension rolls. This treatment experiment is demonstrating what could be done if public health facilities were available in all the provinces for treating blind pensioners.

Furthermore, federal funds now available from the National Health Programme's General Public Health Grant could be used by the provinces to extend their public health services for the preservation of vision and the control of blindness. It is felt that, if the provinces would strengthen their health facilities in this manner, they could cover the whole field, particularly in the younger age groups.

During the past year the Chief of the division visited all the provincial health authorities, to interest them in this project. A large number of practising oculists were also visited, in order to obtain their views as well as to ensure that the oculists approved by the Department for pension examinations were fully cognizant of requirements in this regard, so that parallel standards of examinations would be maintained, as far as possible, all over Canada.

## CHILD AND MATERNAL HEALTH DIVISION



Activities of the Child and Maternal Health Division during the year were threefold—educational, carrying out demonstrations and surveys, and assisting the Directorate of Health Insurance Studies in respect to the administration of the National Health Grants, *i.e.*, the Crippled Children's Grant and the Public Health Grant where it related to maternal and child health.

### EDUCATION

The French version of the film *Mother and her Child* (*Maternité*), was given its premiere presentations in provincial capitals.

Minor revisions were made during the year in *The Canadian Mother and Child*. This book retained its popularity and some 10,000 copies were distributed each month. It is worthy of note that official and private requests for copies of this book have been received from England, Eire, Newfoundland, the British West Indies, Haiti, Chile, Equador, India, Belgium, France, the United States Zone of Germany, Czechoslovakia and Italy, as well as from Canadians and others residing in the United States of America.

On the occasion of the issuance of the 1,000,000th. copy of *The Canadian Mother and Child* a special function was organized in Montreal by the Information Services Division. Hon. Paul Martin personally presented an attractively-bound copy of the book to a returned soldier's wife of Belgian origin. The Provincial Minister of Health was represented at the ceremony by Dr. J. F. A. Gatién, M.P.P. for Maisonneuve, and Camillien Houde, Mayor of Montreal, presided.

The latest issue of the "pin-up" card *Daily Diet for Mothers* has been revised. It is proving of value to medical practitioners and to public health nurses.

Preparation of a book *Up the Years—From One to Six* was completed and it is hoped to issue this publication during the coming fiscal year. In cooperation with the Physical Fitness Division, a film strip and a booklet describing the *Wetzel Grid* and its uses were prepared.

Lectures were given by the Chief of the Division at the University of Montreal, the University of Ottawa and at various public gatherings. The Paediatric Specialist, while carrying on a special demonstration in British Columbia, took advantage of this opportunity to stimulate interest in the healthful development of school-age children.

The Nursing Specialist was active in British Columbia, Alberta and the Maritime Provinces lecturing to public health nurses, nurses of the Victorian Order, graduate hospital staffs, student nurses and to mothers at clinics. In addition, the nurse assisted in the establishment of a prenatal centre in British Columbia.

### SURVEYS AND SERVICES

With the cooperation of the British Columbia Department of Health, the Paediatric Specialist continued a special health study relating to 8,000 school children in B.C. This study is intended to demonstrate the usefulness of the *Wetzel Grid*, its practicability and advantages and its educational value in a school health service. To date some 5,000 school children have been examined in this survey.

A Mother's Milk Service was organized by the Nursing Specialist in cooperation with the Saskatchewan Department of Health and with the Provincial Branch of the Canadian Red Cross Society. A second centre in Saskatchewan has since organized a similar service and another city is considering such a project.

The Chief of the Division was chairman of the Sub-committee on Still-birth Registration of the Vital Statistics Section of the Canadian Public Health Asso-

ciation. This sub-committee has been particularly active in the past year in view of efforts being made to improve still-birth registration and to evolve a definition of still-birth and live-birth which would be acceptable internationally.

A study was made by the Chief of the Division concerning activities in the United States, on both federal and state levels, relating to crippled children and the information gained has proven useful in advising provinces regarding the establishment of programmes arising out of the National Health Grants. The Chief of the Division also acted as Canadian delegate at the First International Conference on Poliomyelitis, in New York. On that occasion representatives of various countries reported their situation and the activities of their health services in respect to this problem.

### INFANT MORTALITY

In 1947 (latest year for which complete figures are available), a total of 359,094 babies were born alive in this Dominion. This represents a birth-rate of 28.5 per thousand of population—a record high for Canada. In 1947 there were 130,000 more births than in 1938.

Before reaching their first birthday, 16,336 babies died, in 1947. In fact, more than half of them—9,507—died within one month of birth. The infant mortality rate for 1947 was 45—a record low for Canada. The rate is based on 1,000 living births. The reduction in the infant mortality rate in the last ten years is 27 percent, the rate for 1938 being 63, that for 1947, 45.

Canada, today, stands tenth among the countries for which up-to-date statistics are available. New Zealand and Sweden head the list, each with a rate of 25 per 1,000 live births. Australia reports a rate of 29, the United States 32, England and Wales 41. Other countries with a rate lower than Canada's are the Union of South Africa (whites), Switzerland, Norway and the Netherlands.

It should be understood, however, that comparison with other countries is not a true criterion of efforts made on behalf of children unless it is supplemented by information on the conditions in the various countries. Because of her sparse distribution of population, Canada is particularly handicapped in providing services—medical, nursing and hospital. To this must be added extreme climatic conditions which are not propitious for the newborn. Nothing but the utmost care, which is dependent upon extensive education, can bring about a marked saving of infant lives in Canada.

The death rates for infants (babies under one year old) in the Canadian provinces show marked variation. The rates range between 59 and 36. British Columbia and Ontario recorded the lowest rate, in 1947—36, compared with 45 for the whole of Canada. The highest rate was in New Brunswick, 59. Quebec was next with a high rate of 57. Rates for the other provinces were: Alberta, 37; Saskatchewan, 44; Nova Scotia, 44; Prince Edward Island, 45, and Manitoba, 46.

#### *Leading Causes*

Prematurity contributed the highest number of deaths—4,025 in 1947—out of a total of 16,336 deaths of infants; that is, 26.4 per cent of all deaths under one year old. Respiratory diseases caused the next highest number of infant deaths—2,741. These included pneumonia, influenza and bronchitis. Congenital malformations were the third highest contributors to infant mortality—2,172 babies died from these causes. Diarrhoea and enteritis caused 1,699 infant deaths, and injury at birth resulted in 1,552 infant deaths. The above five groups, together, caused 12,189 deaths out of a total of 16,336.

Of all infant deaths, 58 per cent occur in the first month of life. This indicates that the main effort in improving the situation should be to have all mothers avail themselves of pre-natal care, so as to prevent premature births and the birth of debilitated infants—conditions accounting for the greatest number of infant deaths.

In order to deal effectively with the problem of premature birth, which constitutes Canada's major problem, the following measures are considered essential; more nurses specially trained in premature infant care; making human milk available, in many instances; the provision of incubators, and the establishment of special units in hospital services.

Breast-feeding should be encouraged. This would probably be the best means of reducing mortality from diarrhoea and enteritis. Proper precautions should be taken to prevent babies from being exposed to respiratory diseases. Much emphasis should be placed on the importance of a well-balanced diet for the expectant mother, since there is no time in life when proper nutrition has such a profound effect as during pregnancy.

The number of qualified and well-trained nurses should be increased and a better distribution of nursing services effected. The National Health Professional Training Grants should help immeasurably in obtaining well-trained nurses. Health services should be improved, and a more even distribution of them arranged. Here, again, the Grants for construction of hospitals and the improvement of services generally should be of definite value.

### MATERNAL SITUATION

Out of 359,094 births there were 554 maternal deaths in Canada in 1947. This number represented a rate of 1.5 for every 1,000 living births. This is a record low for Canada. In respect to maternal mortality, Canada now has a rate which ranks among the best in the world.

In the last decade this Dominion has realized a marked improvement in the saving of mothers' lives. Comparing 1947 with 1938, the Dominion lost only 554 mothers in 1947 against 968 ten years earlier, although, in 1947, there were 130,000 more births. This means a decline of 64 per cent in a single decade.

The maternal mortality rates for the few countries for which it has been possible to secure 1947 statistics show that France led, with a rate of 1.0 per 1,000 live births; England and Wales reported a rate of 1.2, the Netherlands had a rate of 1.3, while the rate for both the United States and Canada was 1.5.

However, again, comparison with other countries is of little value unless consideration is given to conditions which prevail in the respective countries—for instance, density of population, distribution of medical, nursing and hospital services, etc.

The lowest maternal mortality rate among Canadian provinces in 1947 was .9 in Alberta. The highest was recorded in Quebec, 2.2 out of every 1,000 live births. Prince Edward Island had 2. deaths per 1,000 live births. Nova Scotia 1., New Brunswick 1.4., Ontario, 1.2., Manitoba 1.1., Saskatchewan 1.6, and British Columbia 1.2.

Haemorrhage, toxæmia and infection accounted for 62 per cent of all deaths in childbirth. Abortion contributed another 14 per cent. These four conditions, therefore, are responsible for 76 per cent of the fatalities at confinement. These figures indicate problems requiring most urgent study and attention.

#### *Plans and Progress*

In seeking the probable reasons for improvement in the maternal mortality situation, attention should first be directed to the fact that recently-discovered drugs (the sulpha drugs, penicillin, etc.) have influenced the situation favourably. Another important factor is the more general availability and use of blood plasma and transfusions.

Supervision during the pre-natal period has become increasingly more general. This is due to more intensive educational effort concerning the need and the value of early prenatal care. Better financial conditions have prevailed in Canada during the last few years, making mothers more willing to seek medical supervision and hospital service during their pregnancies as well as for their confinements.

Also, in assessing the reasons for the marked saving of mothers' lives, it is worthy of note that, today, more than 67 per cent of all confinements take place in institutions—compared with only about 41 per cent in 1939. Unquestionably, too, the better standard of nutrition prevailing in Canada in recent years has improved the situation. This is due to many factors, including intensive education concerning the principles of good nutrition. Rationing of food and control regulations have resulted in a better-balanced regime, and improved financial conditions have made it possible for families to provide themselves with foods essential to health.

### *Today's Problems*

Looking at the problems of morbidity in mothers, here are some facts. It is estimated that 33,000 mothers a year require special care following childbirth. Abortions are estimated at 30,000 a year. Still-births average 7,000 a year.

With respect to the mortality of infants, during the first month of life (neonatal mortality), here is the picture. Over half of the deaths in the first year of life occur during the first month—over 8,000 a year (1947—9,491), a rate of 26 per 1,000 live births. Premature births total more than 3,500 a year (4,025 in 1947). Upper respiratory diseases—diphtheria, whooping cough, etc., are still serious problems. Diarrhoea and enteritis in 1947 killed 1,989 children, of whom 1,699 were under one year old. It is estimated that, in addition, there are 50,000 Canadian children suffering from rheumatic fever! These facts indicate clearly the need for continuous and concerted effort to cut our losses in mothers and babies still further.

Table 1 page 147, shows the number of still-births, deaths under one month, deaths under one year and maternal deaths, in Canada, in relation to the total number of live births, marriages and deaths, during the years 1926 to 1947 inclusive.

## CIVIL AVIATION MEDICINE DIVISION



Established as a medical advisory board to the Department of Transport in all matters pertaining to the safety, health and comfort of both aircrew and passengers in relation to flight, the Civil Aviation Medicine Division became actively operative in May, 1948, being assigned offices with the Air Services Branch of the Department of Transport.

This division is responsible to the Department of National Health and Welfare for problems of clinical and professional import and to the Department of Transport for administrative and licencing procedures. Its most fundamental duty—the function most intimately connected with public safety in flight—is the assessment and categorization of all medical examination forms sent in by applicants for either new pilot licence issue or for periodic licence validation. These examinations first are assessed for the fitness or otherwise of each individual to fly and secondly are categorized for the specific pilot or aircrew duties indicated by the examination results.

### *Standards Established*

In order to make this breakdown into several pilot categories, based on physical fitness as recorded in examination findings, it was essential that physical standards be drawn up presenting criteria for judgment of these reports. This was done by the division during the summer and fall of last year in the preparation of *Provisional Physical Standards for Aviation Personnel*, with the assistance of a panel of four ex-R.C.A.F. aviation medical specialists. This publication was circulated to the Department of Transport's Aviation Examiners early in 1949. These Provisional Physical Standards have been written to conform, in format and content, while not necessarily in identical detail, with the *Recommended Practices in Medical Standards* at present approved by the International Civil Aviation Organization.

To standardize examination techniques and procedures and the assessment of borderline disabilities a *Handbook for Aviation Examiners* was written under direction of the division and published by the Department of National Health and Welfare for distribution to the Department of Transport's 220 Aviation Examiners. This text, written to meet Canadian flying needs and conditions, has replaced the 1936 *R.A.F. Air Publication 130* which, until very recently, was the basis of all pilot assessment in Canada.

### *Pilots' Careers*

It is a basic concept of the division's procedure to assess each applicant as fit for the highest physical level possible in each case regardless of the type of licence for which he is applying. This is in definite contrast with the old procedure in Canada, and in effect in other countries, where the pilot is categorized as fit or unfit for the type of licence in which he happens to be interested as his training begins. It has proven of value repeatedly in aiding pilots to plan their flying careers as early as possible. In the event of a potential disability in a young applicant aiming for a permanent flying career, it is considered mandatory to warn him that his useful flying time may be restricted and to suggest the inadvisability of getting into advanced flying training. Going further, the division advises pilot applicants who are below par for flying duties of the consultations and treatment which would be necessary to enable them to meet minimum or desired requirements.

The Civil Aviation Medicine Division's assessment and categorization work up to the end of the fiscal year may be broken down as follows:

Total examinations assessed . . . . .	7,301
Total examinations, unfit for flying . . . . .	172
Total specialist consultations requested . . . . .	71
Total electrocardiograms assessed for commercial and public transport licences . . . . .	715
Total medical flight tests requested . . . . .	13.

The division has advised the Department of Transport with regard to the appointment of some 40 additional Examiners, particularly in those centres where flying activity has been greatest or in areas where new flying organizations are growing.

### *Course for Examiners*

In line with this phase of the division's duties, plans are now virtually complete for holding courses in Aviation Medicine for these Examiners. Classes will be restricted to about 30 physicians who will be given six days instruction in the physiology of aviation medicine and in the practical application of this knowledge in everyday flying and routine examinations. Early applications indicate that approximately 140 Examiners wish to avail themselves of this training.

In a more general way, but nonetheless an integral part of the division's place in the campaign for maximum air safety, further duties include acting in an advisory capacity to other sections of the Department of Transport. The first year has brought to light the need for studies being initiated by this division, either in the nature of original research or as check tests on equipment in use. These, with the approval of the Defense Research Board, will be carried out by the research staff at the R.C.A.F.'s Institute of Aviation Medicine. These represent studies the outcome of which can make flying easier and safer for the pilot as well as more pleasant and safer for the passenger. Work of this sort involves close liaison with aeronautical engineers, the R.C.A.F., the Air Lines and pilot organizations.

## CIVIL SERVICE HEALTH



Activities of the Civil Service Health Division in the fiscal year 1948-49, are logically reviewed in two ways. It is useful to consider, first, general trends and experience in the various fields of activity, and secondly, statistical material, with relevant deductions and explanations.

There have been no fundamental changes in review and tabulation of medical certificates of disability or reports on suitability for employment. Procedures now in vogue are working well from the division's viewpoint and are apparently operating to the satisfaction of departments.

As more uniform reporting of causes of absenteeism develops, it becomes obvious that primary responsibility for control must rest with employing departments. It is interesting to note that personnel officers are accepting this responsibility increasingly and are availing themselves of the assistance of this division in screening applications made on questionable medical grounds. Over the past year there has been a decided increase in the number of referrals for special investigation of physical fitness, assessment of physical or mental suitability for employment, and advice as to disposal of problem cases.

Since the general operation of regulations covering leave and other conditions of employment is under the control of the Civil Service Commission, and as employing departments are permitted autonomy only within specified limits, it has become apparent that there is need for more uniform application of existing regulations within these limits. It is logical to anticipate that a closer control on departmental procedure will ultimately result in statistical material on absenteeism which will greatly enhance the value of the morbidity studies of this division.

Experience to date indicates that the policy of employing private practitioners and existing community facilities for both regular and special examinations is professionally and economically sound. Where concentrations of Government employees are greater and the volume of special cases and problems becomes large, uniformity and promptness of treatment require the services of full-time or part-time medical staff. With this in mind Treasury Board has, within the past year, indicated its approval of limited expansion by the establishment of branch centres in Toronto and Vancouver. The extent of further expansion of the division and the establishment of other branches will be dependent upon the experience, as to their value, gained in these two centres.

The expansion mentioned above will permit, for the first time, the extension of full diagnostic and advisory service of a clinical nature and provision of Nursing Counsellor service to other than the Ottawa area.

The opening of new units during the year indicates an appreciation of the value of the services offered by the division and the desire of departments to avail themselves of its benefits as rapidly as necessary space can be provided. Approximately one-half of all Government employees in Ottawa are now served by Health Units of this division. Of the remainder, certain large groups are still being served by first-aid nursing service under other departmental auspices.

At the Health Centre the professional staff continues to act as a clinical team with full referral of cases for such specialized examination and advice as may be necessary to the total welfare of the employee. It is interesting to note, in this regard, that the services of the psychiatrist and psychologist have become so integrated in the clinical pattern that, from the patient viewpoint, there is little to indicate that a special examination is being made, or special advice being given.

The rate of referrals for psychological appraisal has doubled, indicating a keener appreciation of the importance of personality disorders to employee efficiency and office morale.

While there is a heavy demand for psychological, psychiatric and social services with specific case problems, a large share of the energies of these specialists is being reserved for the purpose of reinforcing the Nursing Counsellor service in these fields within the Health Units. Given such assistance and advice, the Health Unit nurse can, in perfect safety, deal with many of these problems in their incipient or early stages. With the additional free access to expert medical advice and direction, the Nursing Counsellor has truly become a most potent agency for the promotion of preventive medicine in the physical, mental and social fields.

Weekly conferences of both medical and nursing staffs have been continued throughout the year for their high educational and administrative value. It is a matter of considerable satisfaction that many of our staff requirements among Nursing Counsellors could be met by promotions within the division, as individuals became more skillful in the technique of screening, referral and counselling.

Rapid development of new units, coupled with unpredictable delays in recruitment, have resulted in staff shortages which, several times during the year, became so acute as to delay opening of new units and to necessitate temporary closing of others. A complete revision of establishment for the Ottawa area is necessary to permit some flexibility in distribution in cases of illness, leave, or other interruptions of service.

### SUMMARY OF SERVICES RENDERED

#### (a) *Organization*

There have been no changes in the basic organization of the division during the fiscal year 1948-49. Three Health Units were established, making a total of twelve in operation at the close of March 1949. The location, date of opening of new Health Units and the number of personnel supervised by each Health Unit at Ottawa are listed as follows:

Health Unit	Location	Date Opened	Average Number Personnel Supervised
No. 1	No. 2 Temporary Building		2,411
No. 3	No. 8 Temporary Building		1,352
No. 4	A Building, Dept. of National Defence		928
No. 5	B Building, Dept. of National Defence		410
No. 6	C Building, Dept. of National Defence		700
No. 7	Booth St., Dept. of Mines and Resources		400
No. 8	Jackson Building		1,947
No. 9	Hunter Building		1,022
No. 10	No. 6 Temporary Building		915
No. 11	Daly Building Annex	1-5-48	1,535
No. 12	Dominion Bureau of Statistics	16-9-48	1,385
No. 14	Connaught Building	1-2-49	651

Total (approximately) 13,500

At the end of the previous year, 1947-48, approximately 10,000 civil servants in the Ottawa area were provided with a complete health service, including Health Unit coverage. This total has been increased to 13,500 by the establishment of three new Health Units. Nine Nursing Counsellors were added to the staff. There were three resignations, resulting in a net increase of six Nursing Counsellors. Therefore, at the close of the fiscal year 26 Nursing Counsellors in all, under a Chief Supervisor and an Assistant Supervisor of Nurses, were employed to meet the needs of the twelve functioning Health Units.

(b) *Health Units*

Tables 2 and 3, pages 148 and 149, summarize the visits made to the Health Units during the past fiscal year by units, months, sex, nature and classification of visit, and disposal. In all 67,591 visits have been made to the Health Units. The male to female ratio is approximately 2:3. Considering the percentage distribution of employee population in Ottawa; namely, females 47 percent, males 53 percent, this ratio is of special significance. Approximately 47,700 of the grand total were recorded as first visits or visits resulting from new disabilities. The remainder were recorded as repeat visits to the Nursing Counsellor for further treatment or for care of a previously reported condition.

Respiratory, digestive and diseases of the skin and cellular system and menstrual disorders constitute the bulk of visits made to the Health Units. The ratio of respiratory to digestive diseases was approximately 2:1. The increased seasonal incidence during the latter six months of the fiscal year, particularly of respiratory diseases, is amply demonstrated in Table 3, page 149. It has been reliably reported that psychosomatic disorders occur in 30 percent of the industrial population at large. This division's experience reveals that 23 percent of all visits are classified by the Nursing Counsellor as "ill-defined". It is the opinion of the Nursing Counsellors that the vast majority of these visits have an emotional background.

It is noteworthy that almost 66,000 employees, or 97.4 percent, were returned to work following consultation or medical care at the Health Units. It is a reasonable assumption that the division's service has materially reduced man-days lost from illness and has contributed substantially to the over-all efficiency of the government employee.

(c) *Health Centre*

Table 4, page 150, summarizes the work conducted at the Health Centre. In all, 5,267 employees were referred to the Health Centre for examination or consultation by the staff physicians or consultants. Over 2,000 cases were referred by Nursing Counsellors or departmental officers for investigation of, or for consultation with regard to, some specific health or welfare problem of mind or body affecting their daily work.

Some 4,200 X-rays were taken, of which over 90 percent were chest films. This division's program is limited to miniature chest X-rays, 14 x 17 chest films and diagnostic work chiefly of an emergency character. Routine films are taken on all individuals presenting themselves for physical examination in connection with permanency, isolated duty or foreign travel. All working contacts of detected cases are X-rayed as part of the division's tuberculosis control programme. In addition, small departmental surveys are carried out as may be warranted. Facilities do not permit the undertaking of large scale surveys in the government population. Apart from chest films, 250 employees were X-rayed for a variety of conditions, usually as a result of injury or accident.

(d) *Certificate Review Section*

This section continued to be responsible for the review and processing of all medical certificates of disability for duty received from across Canada and the review of all medical examination forms in connection with application for superannuation (Schedule "J") and permanency. Statistical information on sickness absenteeism and injuries on duty was compiled in this section and analysed by the Dominion Bureau of Statistics for the division.

During the past year over 60,000 medical certificates of disability for duty and over 12,000 physical examination records in connection with application for permanency were reviewed. In addition some 250 miscellaneous physical examinations were conducted, or arranged for, by the medical staff of this section, necessitated by application for superannuation or for membership in the Civil Service Mutual Benefit Society, or arising out of repeated absences as a result of illness.

Tables 5 to 10, pages 151 to 155 inclusive, present an analysis of certified illness absenteeism occurring in the Civil Service during the fiscal year ending March 31, 1949. These statistical studies are based on a Civil Service population of approximately 96,000, all of whom come under, or adhere to, the Civil Service regulations for sick leave. They do not include approximately 25,000 exempt or hourly paid employees who are not required to furnish the usual medical certificate of disability for duty.

The following factors should be borne in mind when studying these tables: (1) the number of days lost as recorded are *calendar* days, not working days; (2) the majority of illnesses of three days or less duration are not included, since a physician's certificate is not required to cover these illnesses unless the eight-day allowance period for casual leave has been exhausted. Where an employee who has not exhausted the eight-day allowance of casual leave furnishes a certificate to cover an absence of three days' duration or less, such an illness is classified as a certified illness and is not charged against his eight-day casual leave allowance. This accounts, in the tables presented, for the appearance of certified illness of less than four days' duration; (3) accidents on duty are not reported in full for this period and are to be the subject of a separate study at a later date; (4) the approximate distribution of government employee population across Canada is males, 70 percent, females, 30 percent.

Table 5, page 151, shows the total number of certified illnesses and days lost, by sex, in the Civil Service during the fiscal year ending March 31, 1949. The number of illnesses reported totalled 47,254, accounting for 716,653 days lost, an average of 15.2 days lost per illness. The illnesses have been broken down into durations of one to three days, four to nine days, 10 to 30 days, and over 30 days.

Bearing in mind the female to male ratio of 30 to 70, it is significant that females accounted for 43 per cent of the total number of illnesses reported, representing a 30 percent increased incidence of illness in females. Females were responsible for only 36 percent of the total time lost. It follows, therefore, that females show a greater tendency to illness of short duration, particularly of one to three days and, to a lesser extent, of four to nine days.

Only 11 percent of the total number of illnesses are of over 30 days' duration, yet this group accounts for over one-half of the total time lost and averages 68.3 days per illness. In this group a relatively small number of illnesses of long duration account for this seemingly high average: e.g., tuberculosis of the bone—275 days; pulmonary tuberculosis—365 days plus; endocarditis—110 days; cerebral thrombosis and hemorrhage—183 days, and cancer—273 days.

Table 6, page 152, reveals the number of illnesses and number of days lost, together with the average days lost for each class, by sex. Over 42 percent of the total number of illnesses reported resulted from diseases of the respiratory system, accounting for 23 percent of the total days lost, whereas just over 13 percent of the total number of illnesses reported were due to diseases of the digestive system, accounting for 13 percent of the total days lost. Diseases of the circulatory system accounted for only 4.7 percent of the total number of illnesses reported but were responsible for 11.2 percent of the total days lost. The average number of days lost for each illness of the respiratory system was 8.3 days, for each illness of the digestive system 15.5 days, and for each illness of the circulatory system 35.7 days. These findings are very similar to those experienced during the fiscal year 1947-48.

Tables 7 and 8, pages 153 and 154, depict respectively the number of illnesses and days lost, by class of disease and by sex, broken down into durations of one to three days, four to nine days, 10 to 30 days, and over 30 days. Diseases of the respiratory system accounted for by far the largest number of illnesses and days lost in each absentee period. The over-all ratio of the incidence of respiratory to

digestive disease is approximately 3 : 1, as compared to the ratio of 2 : 1 in visits made to the Health Units.

Table 9, page 155, shows the percentage distribution of illnesses and days lost by sex and by classes. This table should be studied in conjunction with Table 6, page 152. Significant observations to be made in Table 9 have been commented upon above.

Table 10, page 155, indicates the number of persons ill on more than one occasion, together with the total number of illnesses involved and the percentage of the total number of illnesses ascribed to each of these groups. It will be seen that just over 32,000 persons or one-third of the total employee populations had an illness of sufficient severity to warrant furnishing a medical certificate during the fiscal year. Of this total only 9,000, or approximately 10 percent, are ill on more than one occasion, a fact of considerable interest.

Table 11, page 156, summarizes the separations from the Government service, by cause of disability, broken down into five-year age groups. During the fiscal year there were 211 separations from the service on medical grounds. Approximately 83 percent were retired between the ages of 50 and 60. Diseases of the circulatory system, bones and organs of movement, and mental diseases constituted the three chief causes of disability responsible for separation from the service.

#### (e) *Associated Activities*

During the latter half of the past year several amendments have been made to the Daily Tally Sheet and Monthly Health Unit Summary forms, enabling more information of a social and welfare nature to be gathered at the Health Units. The Employee Health Record form was considerably enlarged and revised during the year and a separate confidential welfare folder was devised for use with the Employee Health Record form.

The Civil Service Health Division continued to act in an advisory capacity to the Civil Service Commission, Treasury Board, Federal Employees' Compensation Division of the Department of Transport, and the Unemployment Insurance Commission, on matters of policy involving the health of personnel. The constant need for discussions with these groups promises early establishment of interdepartmental committees upon which this division will be represented for the purpose of advising on policy and disposition of individual problems.

The division has given full assistance to the St. John's Ambulance Association in that organization's extensive first-aid training programme amongst government employees.

### CONCLUSIONS

The past fiscal year, the second of actual operation, has been most interesting and gratifying. The division has shown healthy growth both as to coverage of employees and in the scope of its activities. The soundness of the basic plans and policies upon which the service has been built would appear to be manifest.

Constant vigilance is still required to prevent the development of a full treatment service or the misuse of the division's facilities in the handling of purely administrative and disciplinary matters. Strict adherence to predetermined policy coupled with constant educational effort is gradually eliminating the seriousness of these problems.

Some progress is being made with respect to improvement in working conditions. While a great deal of overcrowding and occupation of unsuitable office space still exist, renovations and redistribution of personnel are proceeding. New construction, which has been forecast or commenced, promises modern office accommodation and more ample working space in the years immediately ahead.

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## DENTAL HEALTH DIVISION



Directing its efforts chiefly to broadening the field of preventive dentistry, with a view to reducing the prevalence of dental caries and periodontal diseases, the Dental Health Division this year continued its educational work and participated in promising research activities.

It conducted post-graduate courses for dentists in dentistry for young children and it engaged in extensive studies of the possible caries-prevention value of placing sodium fluoride in public water supplies. During the year the mouths of more than 4,500 children were examined and oral conditions were recorded and tabulated in detail.

To further the cause of prevention, the division carried on the preparation of dental health education material, in the form of booklets, folders, posters, films and filmstrips for use in schools, health units, industrial plants and private dental offices.

This informational campaign warned that less than one percent of people escape tooth decay and that more teeth are lost after the age of 30 years from periodontal disease than from decay. Admitting that it was impossible to estimate the number of people who suffer from the pain and other ill-effects of infected teeth, alveolar abscesses, pyorrhoëa, lack of mastication powers and personal disfigurement, the division sought to make Canadians realize that only through regular early dental care of the child can dental disease among adults be brought within controllable limits and diseases related to dental infection and deficiency be avoided.

Consultant service was again provided this year to other divisions of the department and to provincial departments of health in matters related to the practice of dentistry and to dental public health generally. Liaison was maintained in all its work with the Canadian Dental Association.

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## EPIDEMIOLOGY DIVISION



The term "epidemiology" is often confusing to the public and to the medical profession alike. Although, in the past, the science of epidemiology has been associated chiefly with the control of communicable diseases, it has now achieved an esteemed position in the broad field of preventive medicine inasmuch as it embraces every branch of public health which deals with the cause, spread and effect of disease processes. Dr. Maxcy, of Johns Hopkins University, a noted authority in public health, has defined epidemiology as "the field of science dealing with the relationships of the various factors which determine the frequencies and distributions of an infectious process, a disease or a psychological state in a human community." From this definition it will be noted that the present concept of epidemiology gives this subject much wider scope than had been visualized in the past.

Although epidemiological techniques and applications may be applied to almost every section or specialty in the practice of public health, the Epidemiology Division deals chiefly with the study and control of communicable and non-communicable diseases, as well as with the application and evaluation of statistical methods and data. The members of this division are therefore constantly in association with those in the statistical and laboratory fields in a collaborative effort to meet the many diversified problems which arise from day to day. This division must also be prepared to assist in controlling sudden epidemics of contagious diseases which may develop in any part of Canada.

Since Dr. D. F. Milam, of the Rockefeller Foundation, submitted his report, "A Survey of the Epidemiological Services in Canada: 1947," the Epidemiology

Division of this Department has endeavoured to carry out the three chief functions he recommended, namely —providing investigative, control and information services.

### *Studies Started*

During the first year of operation of this division (1948-49) considerable time has been expended in conducting a general morbidity study in the East York-Leaside Health Unit in the Province of Ontario. This has been a collaborative project between the School of Hygiene of the University of Toronto, the Medical Officer of Health of the Unit, and this division. As it is well recognized that the collection of general morbidity statistics is vital to public health, health insurance and civil defence programmes, the main purpose of this particular study has been to probe the field of general morbidity in order to find ways and means of obtaining valid information about it, and, at the same time, to study the psychology of securing this information in family units.

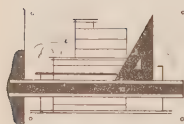
An epidemiological study of poliomyelitis among the Eskimo population at Chesterfield Inlet, N.W.T., was carried out in March 1949 in conjunction with a medical team from the University of Manitoba, the Indian Health Services directorate of this department and from the Royal Canadian Army Medical Corps. This epidemic was unique inasmuch as it involved approximately 275 Eskimos, living under frigid climatic conditions, of whom approximately 27 percent developed clinical poliomyelitis with 37 paralytic cases and 13 deaths. The virus responsible for this outbreak has been isolated by monkey inoculation.

Various collaborative efforts between this division and the Dominion Bureau of Statistics, the Laboratory of Hygiene, and others, have been carried out during the past year by way of assisting provinces to plan general morbidity surveys and, as well, to stimulate various groups in the planning of investigations for the study of brucellosis, amoebiasis, diabetes, cancer and arthritis.

Members of the staff of this division have also contributed their services to other divisions of the department on various intra-departmental procedures and problems.

The division has created a new filing system, by subject headings, and currently peruses a large number of scientific journals from which a reference index is compiled. It has also attempted to keep in close contact with others in this country and abroad who are engaged in a similar type of work and who may contribute to the general pool of information. Because of these measures, the Epidemiology Division is now in a position to provide, on a limited scale, an information service which is available on request to medical groups, public health workers, and others.

## HOSPITAL DESIGN DIVISION



Responsibilities related to administration of the Hospital Construction Grants under the new National Health Program were assigned to the Hospital Design Division this year. This division was required to check all submissions, determine the bed capacity for grant purposes and consult on planning problems arising out of projects initiated.

More than 100 hospital plans were studied during the year for the purpose of determining the amount of the Grant which could be applied to these projects. In many cases suggestions were made for improving designs and in some cases explanatory drawings were also produced.

The Hospital Design Division was actively engaged, at the same time, on its regular work which includes the collection, tabulation and provision to the provinces of up-to-date information regarding the planning of care and treatment institutions,

and the architect was available to local authorities at all times for the study of problems of construction and design.

The division produced a booklet on *General Standards of Hospital Construction* which has had wide distribution and which is used as a basis in determining eligibility of hospitals seeking aid under the federal Grants plan.

Consultation was also given on departmental planning problems and drawings were produced where required. The Chief of the Division read a paper to the Royal Architectural Institute of Canada on the operation of the Hospital Construction Grants plan and on modern trends in hospital design.

Staff of this division now consists of two draughtsmen and a stenographer, as well as the Chief.

## INDUSTRIAL HEALTH



Since its establishment in 1938, the services of the Industrial Health Division for improving the health and working environment of Canada's working population have steadily expanded. In 1948, a further increase in professional staff and added laboratory facilities assisted the division in meeting the health needs of an enlarged Canadian labour force working in more numerous and more diversified industries. During the year, Dr. K. C. Charron was appointed Chief of the division.

The past year witnessed an employment peak with more than five million persons gainfully occupied in a wide range of industries, trades and services that make up Canada's complex economy. Improving the health of this large section of the population, while remaining a public health objective of major importance has also become a critical factor in offsetting labour shortages and in maintaining high production rates. In achieving this objective, the co-ordination of a large number of scientific and technical disciplines are required in the practice of industrial health. This task is being accomplished through the efforts of many health agencies which the Industrial Health Division serves in a consultative and advisory capacity. Working in continued liaison with governmental and voluntary health agencies, and on numerous occasions with industrial and labour organizations, the division has supplemented the industrial health activities of these bodies through its own medical, laboratory and information services.

## MEDICAL ADVISORY SERVICES

Since a basic aspect of industrial health is the application of medical knowledge to the maintenance of the health and well-being of persons at work, the division continued to provide medical and nursing consulting services for improving and promoting plant medical programmes and for appraising industrial health problems.

It is estimated that the average sickness rate of an employed person in Canada is nine days per year, representing an annual economic loss of over \$600,000,000. This burden of sickness and resulting absenteeism can be significantly reduced by enlarging the number and scope of health services in Canadian plants. In promoting this type of adult health programme, the division's medical staff have engaged in a continual educational campaign to inform industry of the benefits to be derived from a plant medical service. Through addresses to industrial and professional audiences and by numerous articles published in technical and lay publications, the medical and nursing staffs of the division have outlined the various functions of an industrial medical department. In these endeavours, they have stressed the role of medical examinations in industry with vocational guidance and rehabilitation; the plant medical care of occupational accidents and illness; medical and engineering control of occupational hazards; and health and educational counselling.

Canadian industry is composed largely of small units employing less than 500 persons. Establishments of this size cannot economically provide all the personnel or facilities required to deal with the diversified health problems of modern industry. To meet this difficulty which is a critical barrier to the more rapid development of industrial medical services in Canada, the division has urged that industry consider the sharing of medical services and facilities. This can be accomplished by the grouping of such services for a number of plants in one area or by using the part-time services of a physician. Canadian industries, over the past year have demonstrated considerable interest in the subject. In co-operation with other interested agencies, the division is actively engaged in promoting further developments in this field.

### INDUSTRIAL HEALTH STUDIES

A major responsibility of the medical staff has been the study of environmental factors in various industries to determine their effect on worker's health. With the expansion and specialization of Canadian industry, new conditions, processes and substances are continually being introduced and these may create occupational health hazards unless adequate preventive measures are adopted to reduce excessive exposure of workers. In order to assess new or changed occupational exposures and to determine whether they constitute a hazard to health, the division conducted further health surveys of Canadian industries in 1948.

At the request of provincial departments of health, surveys were carried out in several provinces and occupational exposures in several groups of industries were determined, including foundries, coal mines, fertilizer plants, machine shops and quarries. The findings from these surveys were then analysed in relation to existing environmental health standards so that the presence and extent of any hazard might be evaluated. Since dust-producing processes were typical operations in most of these industries, special attention was paid to the silicosis hazard, and where indicated, the necessary control measures were recommended.

In enlarging its survey work, the division obtained further basic information on the health problems of Canadian industries which is fundamental to the sound development of industrial health programmes. The factual data being secured on conditions of the working environment are invaluable guides in assisting industry and provincial health departments in formulating their industrial health policies.

Technical assistance and information were provided in answer to many requests received from governmental and industrial sources. Among the industrial health problems submitted to the division by provincial health departments and various industries were those concerning the disposal of fluorescent lamps, control of dermatitis, use of explosives in wells, occupational diseases in the petroleum industry, and control measures required in the use of various toxic substances. Also included in this service were medical and laboratory investigations in several departments of the Federal Government on lighting, noise, and contamination of the air by toxic substances.

During the past year members of the staff published papers in various professional journals and gave addresses on health problems of Canada's working population at meetings of public health, medical and scientific associations. The staff also participated in conferences of various professional bodies in the United States and Canada. The Chief of the division was a member of the executive committee of the Industrial Division of the Health League of Canada.

### EDUCATIONAL AND TECHNICAL INFORMATION

The provision of information on industrial health practices to management and labour, and to professional personnel concerned with the health of workers

continued to be a primary activity of the division. In carrying out its comprehensive programme of health education, the division has kept all sectors of industry informed of established methods for maintaining safe and healthful working environment. It has provided a further essential service by compiling recent data on new materials and processes which may constitute sources of potential or actual health hazards.

The division continued publication of its monthly *Industrial Health Bulletin* which contained articles on important aspects of industrial health. The bulletin was supplied to all Canadian establishments having more than fifteen employees, to 2000 trade union bodies, to governmental and professional agencies and to many interested individuals. A large correspondence with industrial and labour groups on articles appearing in the bulletin was a significant feature during the year.

The publication of a new semi-annual periodical *The Industrial Health Review*, was started in 1948 to meet the need for a wider circulation of technical information on industrial medicine and hygiene in Canada. This is published in 10,000 copies for distribution to physicians, industrial nurses, public health organizations, industrial chemists and engineers and others interested in the maintenance of a high standard of health among our working population. The *Review* has the support and active participation of Canadian universities, the Canadian Medical Society and other professional bodies in Canada, throughout the Commonwealth, and in the U.S.A. The wide interest in this new publication is reflected by the fact that approximately 4000 physicians in Canada have asked to receive it. Considerable correspondence requesting additional information on the technical data appearing in the *Review* is further indication of the valuable function it is fulfilling.

A highlight of the past year was the preparation and final editing of a 300 page reference manual for physicians on occupational diseases. The manual, entitled *A Guide to the Diagnosis of Occupational Diseases*, was compiled jointly by the staffs of this division and the Division of Industrial Hygiene of the Ontario Department of Health. It was prepared in response to the growing interest in industrial health problems on the part of the medical profession, and is intended to be of assistance in the practice of industrial medicine.

Among further educational material prepared during the year were seven posters on general industrial health topics which are being issued as inserts in the *Industrial Health Bulletin*. A pamphlet on the control of carbon monoxide in garages was also published.

## LABORATORY SERVICES

During the fiscal year the laboratory service of the division was applied toward technical solution of health problems having their origin in the working environment and was combined with the medical and educational approaches to provide a broad co-ordinated attack on the causes of ill-health among Canadian wage earners.

Reference has already been made to environmental studies conducted in the industrial field in co-operation with provincial authorities. This phase of industrial health laboratory work was supplemented by investigational and analytical activities in the Ottawa laboratory.

During the fiscal year, the laboratory's Geiger-counter X-ray spectrometer was standardized for estimation of silicosis-producing properties in industrial dusts and manufacturing materials. By the end of the fiscal year more than 800 analyses had been run. Many of these, mine and foundry dusts referred by Provincial health departments and Compensation Boards, were found to contain high percentages of free silica. This scientific information enabled provincial authorities to work out protective measures based on an accurate knowledge of the environmental conditions threatening health of exposed employees. The instrument is the first of its kind to be used in Canada wholly for industrial health purposes.

Successful field trials of a simple device applicable to testing factory air for the poisonous fumigant and fire extinguisher, methyl bromide, were carried out in collaboration with the Fumigation Service of the Dominion Department of Agriculture and Trans-Canada Airlines. The department has filed a patent application on the device with a view to ensuring its future availability to those engaged in preventing occupational diseases caused by poisonous substances such as methyl bromide and other industrially-useful compounds of a related chemical character.

### ASSISTANCE TO OTHER AGENCIES

Environmental service in conjunction with efforts to ensure a high level of health in the public service has been extended to the Civil Service Health Division. This has included a survey of lighting in railway mail cars, analyses of urine for lead, and dust measurements in a government laboratory engaged in work with high silica materials.

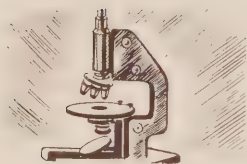
Laboratory staff served on the Safety Code Correlating Committee of the American Standards Association and the Association's sub-committee on Maximum Allowable Concentrations of Toxic Materials in air. This representation was on behalf of the Canadian Engineering Standards Association upon whose Mechanical Refrigeration Committee members of the staff of the laboratory also serve in connection with the control of potential health hazards due to refrigerant liquids.

New to the Canadian industrial scene are a broad range of organic pesticides, of which some have been found to be toxic to man. The laboratory has been co-operating during the year with the Entomology Division of the Dominion Department of Agriculture with a view to ensuring that the federal department and the provincial health agencies are kept informed of possible health hazards associated with manufacturing, packaging, spraying and other forms of application of these important economic poisons.

Efforts in this field will enable Canadian industry and agriculture to employ these chemical aids for the poisoning of pests without ill-effects to the working people concerned. To this end the preparation of operational manuals covering the health aspects of *DDT* and parathion was commenced toward the end of the year. Similar manuals are projected for the numerous other pesticides appearing on the Canadian scene.

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## LABORATORY OF HYGIENE



The functions of the Laboratory of Hygiene are gradually undergoing a change in character. For several years the demands for more public health services have been growing and, while there has been an increase in activities related to the Food and Drugs Act, calls upon the Laboratory for other consultative services have multiplied at a much greater rate.

The Laboratory of Hygiene continued to serve in a technical advisory capacity to the Chief Dominion Analyst in respect to the quality and safety of certain foods and drugs, such as serums, vaccines, toxins, toxoids, penicillin and streptomycin. During the past year, officials of the Laboratory of Hygiene inspected many of the establishments of the manufacturers licensed for the production of this class of biological drugs.

In the field of public health the Laboratory of Hygiene is becoming recognized as the national public health laboratory of Canada and is being consulted about many national problems. The Directorate of Indian Health Services is making increased use of the Laboratory's facilities to investigate health problems in the

Northwest Territories. Subjects such as parasitic infections of Eskimos and infectious diseases of unknown etiology are being referred to its experts for advice and help. Assistance is being rendered almost daily to the provincial laboratories by providing services and conducting investigations which to a great extent are beyond the facilities of most provincial laboratories. Overlapping of laboratory services is avoided by the Technical Advisory Committee on Public Health Laboratory Services. This group met in December last in Ottawa in the central laboratories of the Laboratory of Hygiene. Specific services rendered to the provinces are detailed in reports, which follow, of the various sections of the Laboratory.

Activities and demands for services have increased to such an extent that the remodelled laboratories which were occupied during the previous year are already crowded and there is little space available for new workers. It is hoped that the Laboratory will be provided with thoroughly modern quarters in the near future.

A branch laboratory is operated at Kamloops, B.C. During the past year, plans were prepared for a new laboratory building to be located in Edmonton, but to date, it has not been possible to secure authorization for the new building. The department has received an invitation from the University of Alberta to locate the laboratory on the campus of that institution. Such a site offers many advantages including hospital facilities, clinics, and close collaboration with all the medical departments of a university. The present accommodation at Kamloops consists of one small building for infected animals. Laboratory space is provided by the Department of Agriculture in their laboratory building, since the Department of National Health and Welfare does not possess its own laboratory space there. The work carried out at Kamloops is dangerous and with these inadequate facilities it is remarkable that there have been no laboratory infections among the staff. This can only be ascribed to the meticulous technique and extraordinary care exercised by the head of this branch.

The Laboratory of Hygiene continues to be handicapped by a shortage of trained specialists and there still are several vacancies for senior personnel. Difficulties in recruitment are undoubtedly related to salaries offered, particularly for senior staff, having in mind the high degree of specialization, experience, and technical competence required.

Tribute is due to personnel of the Laboratory of Hygiene for conscientious and enthusiastic devotion to duty, particularly on the part of the staff of the Kamloops branch, who in spite of serious floods last spring (when there was water some 28 inches deep in the animal building) carried on with their tasks, proceeding to and from the laboratory by boat and working under great hardship.

## SECTION OF MEDICAL BACTERIOLOGY AND IMMUNOLOGY

During the year the Section of Immunology was combined with that of Bacteriology. This reorganization led to better distribution of work and better use of staff. For administrative purposes, maintenance of the animal colonies was also brought under the direction of the Bacteriology Section. A highly trained parasitologist was added to the staff, and diagnostic services for parasitic infections are now available. Special studies of parasites of public health importance in Canada are being undertaken.

The work in this Section falls into three broad categories—control, research, and provision of special services to the provinces. These three phases are in most cases closely integrated. Special services to the provinces were expanded, research projects initiated in previous years were continued, and new investigations undertaken. The number of control tests on biological drugs were considerably increased during the year.

### Biologics

*Control Testing:* A study of certain biological drugs prepared by each of the different licensed manufacturers and offered for sale on the Canadian market was undertaken. In this survey 79 specimens of diphtheria toxoid (from 10 manufacturers), 16 of tetanus toxoid (from eight manufacturers), 15 of diphtheria antitoxin (from seven manufacturers), 11 of tetanus antitoxin (from eight manufacturers), nine of scarlet fever streptococcus antitoxin (from three manufacturers), and 10 specimens of Schick test toxin (from three manufacturers) were tested for potency. Three lots of scarlet fever streptococcus antitoxin were found to contain less than the stated potency and one lot of tetanus toxoid was found unsatisfactory and its distribution prohibited.

In addition, safety and identity tests were performed on eight samples of diphtheria toxoid, 10 samples of tetanus toxoid and one sample of staphylococcus toxoid. All specimens satisfactorily met the requirements. Nine samples of pertussis vaccine were tested for toxicity and found satisfactory.

The Inspection Board of Canada and the Food and Drug Divisions submitted a large number of specimens to be tested for sterility and safety. These specimens were of a great variety, consisting of such drugs as poison ivy extract, glandular extracts, vaccines, serums, toxoids, intravenous solutions and distilled water, dressings and bandages.

Nine lots of smallpox vaccine were tested for potency and bacterial content and all were found to be satisfactory. The feasibility of producing smallpox vaccine of low bacterial content has been convincingly demonstrated over a period of many years. Accordingly, the requirement under the Food and Drug Regulations setting the maximum allowable number of non-pathogenic viable bacteria at 1000 per ml. of vaccine has been amended to permit not more than 500 such bacteria per ml.

*Special Studies:* Because of the increasing interest on this continent in tuberculosis immunization, special studies were started on BCG vaccine. This vaccine consists of attenuated (non-pathogenic) but living *M. tuberculosis bovis* bacilli, and hence extreme precautions are of absolute importance in its manufacture and strict control measures necessary. Laboratory tests directed towards these control measures are being studied, and regulations for the manufacture for sale of these products under licence are being prepared. Laboratory tests to determine the potency and identity of tuberculin are also being studied.

Further collaborative studies on the immunization of children have been arranged with the Department of Bacteriology and Immunology of McGill University and the Child Welfare Association of Montreal. These studies are designed to determine the effect of inherited antibodies on active immunization. The study is well under way and it is expected that 100 expectant mothers and 300 children will have taken part in this experiment before it is completed. The immunizing substances under study are diphtheria toxoid, whooping cough vaccine and tetanus toxoid. The results of the previous study on *The Use of Combined Antigens in the Immunization of Infants*, by this group of collaborators, Dr. D. S. Fleming of McGill University, Miss E. M. Beith of the Montreal Child Welfare Association and Dr. L. Greenberg of the Laboratory of Hygiene, were published in the August, 1948, issue of the *Canadian Medical Association Journal*.

Studies were undertaken and a paper presented at the Canadian Public Health Association Laboratory Section meeting in December, 1948, on the *Schick Test Reaction, Serum Antitoxin Titre and Resistance to Lethal Doses of Diphtheria Toxin in Guinea Pigs* by L. Greenberg and M. Roblin. It was found that the reaction to diphtheria toxoid in the guinea pig is very similar to that in the human. This paper was published in the March, 1949, issue of the *Canadian Journal of Public Health*.

*Pyrogen Tests:* A number of drugs, other substances, and equipment were tested for pyrogenicity. The results of these tests were as follows:

	No. Tested	No. Containing Pyrogens
Intravenous solutions	214	34
Transfusion sets	84	5
Antitoxins	6	0
Streptomycin	79	4
Gonadotropin	9	1
Liver Extract	2	0
	394	44

Most of the intravenous solutions and the transfusion sets were tested as a service to the Canadian Red Cross Society Blood Donor Service. The remainder were tested at the request of the provincial public health laboratories.

#### *Special Bacteriology*

*Salmonella:* The work of the Laboratory of Hygiene in the field of enteric bacteriology is designed to provide a special service to the provincial laboratories. Firstly, the Salmonella laboratory prepares for free distribution to the provinces standardized agglutinable suspensions of typhoid and paratyphoid bacilli for use in the routine Widal test. The preparation and standardization of these reagents in one central laboratory is a valuable aid towards the securing of consistent results and the maintaining of a standard high quality of performance in the laboratories across the country. Nine of these reagents (*S. typhosa* H and O, *S. paratyphosa* A, H and O, *S. paratyphosa* B, H and O, *S. paratyphosa* C, H and O, *S. cholerae suis* var *Kunzendorf* H-non-specific), were prepared for distribution and the annual requirements of these suspensions of the laboratories of the Alberta, British Columbia, Manitoba, Nova Scotia, Prince Edward Island, Quebec, and Saskatchewan Departments of Health and of the laboratories of the D.V.A. hospitals were filled. Suspensions were also supplied at the end of the year to Newfoundland. A total of 165 litres of suspensions were supplied during the year. Standard antisera for testing the agglutinability of these suspensions were also prepared and 216 ml. distributed. Numerous problems in the preparation of these standard reagents were investigated and some are still under investigation.

Secondly, the Salmonella laboratory seeks to provide a national service for the typing (identification) of all the serological types of Salmonella. This project was undertaken at the request of the Technical Advisory Committee in December, 1947. In December, 1948, it was announced to this committee that this laboratory was now prepared to provide this service and since then cultures are being received regularly for identification. By March 31, 1948, 30 cultures had been received and the salmonellas successfully identified. The following species were identified: *S. typhi* murium, *S. neuport*, *S. paratyphosa* B, *S. newington*, *S. bredeney*, *S. oranienberg*, *S. minnesota*, *S. thompson*.

The activities of this section are constantly expanding and the need for more laboratory space and technical help has become more acute. A total of 21 cultures of *S. typhosa* isolated from clinical cases were received from various laboratories for "phage" typing and were successfully identified.

*Diphtheria:* A typing service for cultures of *C. diphtheriae* to the Provincial Departments of Health started several years ago was continued and a report presented to the laboratory directors at the Technical Advisory Committee meeting in December. A total of 85 cultures were received for identification. The majority came from British Columbia. Special studies on a reported type of diphtheria bacillus "*C. diphtheriae minimus*" were initiated and are continuing.

*Hemolytic Streptococci:* The Laboratory continued to prepare and to supply on request to the provincial Departments of Health and to the laboratories of the

D.V.A. hospitals grouping sera for the diagnosis of Lancefield Groups A, B, C and G hemolytic streptococci. A total of 240 ml. of these sera was distributed during the year.

Only 72 cultures of hemolytic streptococci were received for typing, 50 of which were sent in by Dr. T. E. Roy of the Sick Children's Hospital, Toronto, where a study on rheumatic fever was being undertaken. With the cessation of hostilities, the interest in the epidemiology of streptococcal infections has apparently waned almost to the vanishing point. The serological typing of hemolytic streptococci is an invaluable aid in the epidemiology of streptococcal disease, and for this reason the laboratory directors requested that the involved and intricate set-up presently established at the Laboratory of Hygiene for this purpose be maintained in case of a national emergency or until the epidemiological services in the country had been expanded sufficiently to make use of this tool adequately. In addition, 31 strains from the large stock culture selection on hand were distributed on request.

*Dental Caries:* The lactobacillus studies planned in 1947 in cooperation with the Nutrition and Dental Health Divisions as part of their nation-wide survey of dental caries were begun in the early part of 1948. Methods were studied and improved. The year's programme included periodic surveys of three schools in Ottawa and four Indian residential schools at distant points in Canada. A total of 766 specimens of saliva from 318 individuals were examined for content of lactobacilli. A certain correlation has been found between caries activity and lactobacilli in the saliva. In general, there is a low lactobacillus count in the absence of caries and a high lactobacillus count in the saliva of patients with marked caries, but this correlation is not absolute. The counts are more difficult to evaluate as an index of the "degree" of caries activity in the mouth. Since the data are very limited, it is hoped that the significance of these lactobacilli counts will be revealed by numerous successive samplings from the same individuals as well as by a broadened sampling programme.

*Plaster of Paris Bandages:* The sterility and safety of Plaster of Paris bandages were questioned and a bacteriological survey of such bandages conducted. This survey was undertaken because of a fatal case of tetanus which had occurred in Montreal, in which evidence pointed to a Plaster of Paris bandage as the source of contamination. Over 200 bandages, representing products from 14 commercial manufacturers and 14 hospitals that made their own bandages, were carefully analysed bacteriologically, and, with one exception, all were found to be highly contaminated, many of them (over 60%) with pathogenic microorganisms. The manufacturers and hospitals concerned were notified of these findings and efforts to develop a sterile plaster bandage are now being made by some manufacturers. The results of the survey were made available to the medical profession in an article published in the January, 1949, issue of the *Canadian Medical Association Journal*.

*Dental Impression Materials:* Evidence of bacterial contamination in dental impression materials was produced during the survey of plaster of paris bandages. Little attention has been paid in the past to the bacteriology of such substances but since some of the bacteria found were pathogenic, it was decided to conduct a more extensive bacteriological survey of these materials available in Canada. Dental impression materials were obtained from the dental supply houses across Canada. Of 117 specimens examined, 28 were found to be contaminated with pathogenic anaerobic spore-forming bacteria (*Clostridia*). The significance of this contamination has not been established but the results of this survey were brought to the attention of the dental profession by their publication in the April, 1949, issue of the *Journal of the Canadian Dental Association*.

### *Shellfish*

#### *Control*

(a) *Oysters:* During June to October, the mobile laboratory was again engaged in shellfish control work in the Maritime Provinces. Bacteriological surveys were

made of Shediac Bay, N.B., Wallace Harbour, N.S., Pugwash Harbour, N.S., and Amet Sound, N.S. A total of 780 samples of water in these areas was bacteriologically tested and recommendations were made to the Department of Fisheries which resulted in the earlier opening of oyster beds in Wallace Harbour and the closure of two small polluted areas in Amet Sound.

With the lifting of restrictions in January, 1949, on the importation of American oysters into Canada, routine bacteriological tests were conducted on these imports for sale on the Montreal and Toronto markets. Of 39 samples of shucked oysters tested, 15 were found to be grossly contaminated with coliform bacteria and their sale in Canada prohibited. In addition, 11 samples of shell oysters from producing areas in the United States and Canada were tested and in all cases were found to be satisfactory.

(b) *Mussel Poison*: In collaboration with the Department of Fisheries and the Fisheries Research Board, shellfish producing areas in the Maritimes (Atlantic) were again sampled according to a scheme of control approved by the departments concerned and put into effect in June, 1948. According to this scheme, the shellfish producing areas were divided into three classes according to their past toxicity records, with a key area in New Brunswick (Head Harbour) and one in Nova Scotia (Centreville) to indicate the trend of toxicity.

In New Brunswick, 176 samples of clams (*Mya arenaria*) from 27 sampling stations were tested and 104 samples from 13 areas were found to be toxic, while 14 areas showed no toxicity. There were also 47 samples of mussels (*Mytilus edulis*) tested of which 36 were toxic. In those areas showing toxicity, the period of toxicity was more prolonged than usual with a relatively lower peak of toxicity.

In Nova Scotia, 86 samples of clams from seven areas were tested and 13 samples were found to be toxic. The toxic samples all came from one area, so that most of the clam-producing areas in this province were free from toxicity. Extracts were also received from 28 shellfish-producing areas in British Columbia to be tested for toxicity. There were 111 butter clam extracts of which 44 were toxic, 51 little neck clam extracts with four toxic, three razor clam samples with three toxic, and four horse clam extracts with none toxic. A total of 698 samples of canned clams from 349 commercial packs was tested for toxicity and 11 were found toxic and their sale prohibited.

In addition, 11 samples of live mussels from Les Boules, P.Q., were submitted for test by the county health unit of Matane. Mussels from this area had been suspected of causing five cases of paralytic shellfish poisoning involving three adults and two children, with the death of the two children. Tests showed these mussels to be highly toxic. This area is not a commercial fishing area and the grave danger of eating clams or mussels from any but approved areas is once more demonstrated and the need of more publicity on this point is stressed.

(c) *Clam Bacteriology*: The problem of clam pollution which had been studied for the first time in Canada in 1947 received further attention. Various aspects of clam production in Charlotte County, N.B., were studied in relation to possible public health hazards from this product. A total of 330 specimens of clams and sea water was analysed bacteriologically and these results were discussed with representatives of the United States Public Health Service at a joint meeting in Ottawa in February, 1949.

### *Foods*

Specimens of 44 foods were submitted for bacteriological examination by the Food and Drug Divisions. Of these, 12 were canned products and all were found to be sterile and non-toxic to laboratory animals. In addition, four lots of cheese were examined and all were found to be grossly contaminated and unfit for human consumption. One sample of sausage suspected of containing horse meat was analysed, but precipitin tests failed to demonstrate horse protein in the product.

A number of samples of agar-agar were examined and all were found to be of a satisfactory quality. Official methods were formulated in collaboration with the Bacteriology Division of the Department of Agriculture.

### *Inspection of Licensed Manufacturers of Biological Drugs*

The establishments of 13 manufacturers licensed to manufacture those drugs listed in Parts II and III, Schedule B, of the Food and Drugs Act were officially inspected during the year.

Conditions were found unsatisfactory in the establishments of four manufacturers. Their licences were therefore suspended.

### *Laboratory Animals*

The Laboratory of Hygiene raises guinea pigs, rabbits, and mice for use in its own laboratories, and on occasion is able to render assistance to other laboratories in supplying them with small numbers of animals. The demands on the animal colonies were greater this year than in the past and, although they were able to meet most of the demands, on some occasions it was necessary to obtain additional animals from outside sources. The following table shows the number of animals supplied by the animal colonies during the year ending March 31, 1948 and March 31, 1949:

<i>Year ending</i>	<i>Guinea Pigs</i>	<i>Rabbits</i>	<i>Mice</i>
March 31, 1948	10,755	304	8058
March 31, 1949	14,716	390	6446

Animals obtained from outside sources included, 117 rabbits, 2000 mice, 60 chickens and six sheep.

The guinea pig colony which had been infested for some years with lice (*Melophagus porcelli*) was completely freed of this infestation by dipping the whole colony of 6700 guinea pigs, of all ages, in an emulsion of 0.75% DDT and 0.75% Pine Oil. Not a single accident, disease or death resulted from this treatment. The total production in this colony was increased by approximately 40% during the year.

The rabbit colony is too small to meet the needs of the laboratory, but there is no space available for a larger colony.

The stock of sheep had to be increased from four to seven to meet the increased demands of the laboratory for fresh sheep blood.

The mouse colony stocked with 1000 CFW mice in March, 1948, has developed slowly and is not yet producing nearly sufficient mice to meet the demands of the Laboratory. Production of mice has been seriously impeded by the lack of satisfactory housing conditions. Improvements have been made and further changes recommended in order that the ventilation, humidity and temperature control may be made more satisfactory.

Approximately 500 post-mortems have been performed by the animal pathologist during the year in an effort to investigate and control any infections developing in the animal colonies.

A special type of watering device for the animal cages, which should effect a great saving in expense and time, has been studied and found satisfactory, and it is hoped to install these in the guinea pig and rabbit colonies as soon as possible.

### *Parasitology*

This report covers the work carried out from October 1948 until the end of the fiscal year. Prior to October no investigations in medical parasitology had been carried out by the Laboratory of Hygiene; consequently, the organizing and acquiring of apparatus and references occupied a large part of the first two months. In this connection, there were obtained and cross-indexed some 350 reprints on the subject and a reference library of 80 texts has been built up which compares favourably to any other similar library in Canada.

With a view to obtaining the over-all picture of human parasitology as it exists in Canada, the leading Canadian medical and public health magazines have been cross-indexed back to their original issues and information is also being obtained regarding parasitology done in each province.

*Trichinosis*: Arrangements have been made with two Ottawa hospitals to supply suitable human diaphragm material from the hospital P.M.'s. The Ottawa General Hospital and the Ottawa Civic Hospital each has submitted nine specimens with one diaphragm found positive from each.

In addition, the Kamloops branch laboratory has cooperated in submitting diaphragms from rats collected from the greater Vancouver surveys. Where possible, these rodents have been collected near piggeries with a view to obtaining the possible infection ratio in pigs, the largest source of infection of *Trichinosis* in humans. Of 215 specimens received, 22 were positive.

*Amoebiasis*: This survey is being conducted locally in order that methods and techniques, such as collection, shipping and diagnosis, may be further improved to provide the best service when a long-range program is initiated. Dr. R. J. Gibbons, Department of Bacteriology of Ottawa University Medical School, cooperated by arranging for specimens from medical students. Each of 51 students submitted three samples but no pathogenic protozoa were found.

Daily samples have been received from the Ottawa Civic Hospital from routine admission patients, providing an excellent cross section of parasitological infection in the general population.

No. of specimens received.....	60
Results: <i>G. lamblia</i> .....	4
<i>E. histolytica</i> .....	1

In addition, the following have been received for diagnosis:

R.C.A.F. Station Hospital, Rockcliffe

Blood Smears.....	3
<i>P. vivax</i> Malaria.....	1

Ottawa General Hospital

Feces sample.....	1
<i>T. saginata</i> ova.....	1

A set of 40 teaching diagnostic slides has been collected and made available for loan to the provincial laboratories. This set is being enlarged and brought up to date with new material from time to time.

## SECTION OF SYPHILIS SEROLOGY

The laboratory is participating in a cooperative effort with the provincial public health laboratories to ensure a uniform service in the diagnosis of syphilis and thereby to facilitate the control of the disease. Reagents used in blood tests for syphilis are prepared and standardized at the laboratory for distribution to the provincial groups. The use of reliable, rigidly standardized tests has been encouraged. As a means to this end, a refresher course in syphilis serology was conducted at the laboratory and was attended by senior technicians from the provincial laboratories. Collaborative studies to evaluate the accuracy of the blood tests as carried out in each laboratory are conducted from time to time and a fourth study of this nature was completed recently. New and improved methods of diagnosis are being investigated.

### *Distribution of Reagents*

1. *Antigens*: The following quantities of antigens, prepared and standardized at the laboratory, were distributed to provincial public health laboratories (and hospital laboratories of the Department of Veterans Affairs):

Kahn Sensitized Antigen	12050 cc.
Kahn Standard Antigen	12980 cc.
Kolmer Antigen	900 cc.
Mazzini Cholesterolized Antigen	705 cc.
V.D.R.L. Slide Test Antigen	65 cc.

2. *Dehydrated Guinea Pig Serum (Complement)*: The laboratory is now distributing a full supply of dried complement to all provincial public health laboratories. Prior to January, 1949, while a reserve stock was being accumulated, the provincial laboratories had been obtaining approximately one-half of their total requirements from the Laboratory of Hygiene. During the year, 5189 ampoules of dried complement were distributed (the equivalent of 25,945 cc. of fresh guinea pig serum).

3. *Hemolysin (Amboceptor)*: A total of 385 cc. of hemolysin was distributed during the year.

### *Refresher Course*

In October a refresher course in syphilis serology was conducted at the laboratory for a period of three weeks and attended by senior technicians from eight provincial public health laboratories. (At a later date, a representative from the ninth province and one from Newfoundland spent three weeks at the laboratory). The course proved to be a valuable aid in furthering the standardizing of diagnostic procedures. A comparable course will be conducted in the coming year at the request of the Provincial Laboratory Directors.

### *Serological Evaluation Study*

The fourth dominion-wide serological evaluation study was conducted during the year. Blood specimens from 106 syphilitic patients and from 103 non-syphilitic individuals were distributed, over a period of five months, to each of the provincial public health laboratories, and to a hospital laboratory of the Department of Veterans Affairs. The Laboratory of Hygiene now serves as the national referee laboratory a status given to this section by the unanimous agreement of all directors of the provincial public health laboratories. In previous evaluation studies, certain well known laboratories in the United States had acted in this capacity. The results obtained by the participants will be analysed and summaries prepared and distributed.

### *Clinical Studies*

During the past year, the serological results on 1041 blood specimens obtained from 632 syphilitic individuals and on 724 specimens from 419 non-syphilitic individuals have been analysed on the basis of the clinical histories. It is felt that close collaboration between the laboratory and the clinic is essential in maintaining satisfactory test performances.

### *Publication*

*The Standardization of Serodiagnostic Tests for Syphilis in Provincial Public Health Laboratories, Can. Jour. Pub. Health*, 39: 401-408, October, 1948.

## SECTION OF ANTIBIOTICS AND DISINFECTANTS

Much of the work of this section has in the past been concerned with the laboratory control work on antibiotics and disinfectants. This work is necessary in the laboratory's capacity of providing important technical services for both this department in connection with its enforcement of the Food and Drugs Act (antibiotics

and antiseptics) and also for the Department of Agriculture and their enforcement of the Pest Control Products Act (disinfectants). More recently, a definite attempt has been made to broaden the basis of activities to include clinical studies.

### *Antibiotics*

*Penicillin and Streptomycin:* Here the control work entails among other things: (1) the laboratory examination of antibiotic specimens submitted to this department under the terms of the Food and Drugs Act. The number of penicillin and streptomycin specimens received at the Laboratory of Hygiene this year has approximately tripled last year's submissions, (2) the development of suitable methods of assay (potency, toxicity, sterility, stability, etc.), and their use. Based on these laboratory findings, warnings, rejections, etc. are issued to manufacturers where necessary. Inspections of all licensed antibiotic manufacturers' plants were carried out. New regulations for penicillin and streptomycin were prepared and gazetted. The revision of such regulations is a continuous process as new products and new conditions arise. In addition, tests have been done for other divisions of this and other departments within the government service.

During the past year, laboratory investigation has been carried out particularly with a view to the continued improvement of methods, e.g. (1) Potency (*a*) Chemical: a new chemical method for the estimation of crystalline penicillins has been devised and successfully applied to a large proportion of our tested penicillin specimens. A description of this method will appear in the journal *Analytical Chemistry*. Chemical methods for distinguishing between the various penicillins are being worked out. (*b*) Microbiological: new multiple organism assay techniques are being investigated for dihydrostreptomycin. (2) Sterility: numerous specimens have been subjected to a modified and more rigid sterility test, which was described at the Minneapolis meeting of the Society of American Bacteriologists in May, 1948. (3) Toxicity: particular emphasis has been given to certain toxic principles in streptomycin preparations and their effects on animal tissues. Material relevant to the above work has been published by staff members through scientific meetings and journals.

Additional personnel recently acquired will permit the laboratory, (1) to intensify efforts on the more fundamental investigations of the activity of penicillin and streptomycin, e.g. mode of action, mechanism of resistance, etc., and also (2) to make a better organized attack in the field of disinfectants and antiseptics where very little has been accomplished to date, here or elsewhere.

In the clinical field, standard penicillin and streptomycin preparations have been supplied to provincial hospitals throughout the country. Methods for the clinical testing of penicillin and streptomycin are being worked out with promising signs of improvement in existing methods, e.g. blood levels, sensitivity tests, etc.

### *Newer Antibiotics*

Preliminary investigations of the newer antibiotics are being carried out and tests for these new drugs are under investigation.

### *Disinfectants*

In conjunction with the Department of Agriculture, a determined effort has been initiated to make the administrative procedures for the quality control of disinfectants both more consistent and more effective. Disinfectants present a much wider variety of active ingredients and final products than do antibiotics. Each one may present problems peculiar to itself which requires individual investigation. This is done where possible. This year 50% more disinfectant specimens were received. The incidence of warnings issued and products rejected is considerably higher for disinfectants than for the antibiotics.

Future plans include: (1) increased emphasis on the laboratory investigation of the more fundamental aspects of antibiotic and disinfectant action. 2, the development of new and more efficient methods for clinical application for antibiotics

(and antiseptics) with a view to making these more available to the community at large and (3) extension of preliminary control work on the new antibiotics—*aureomycin*, *chloromycetin* and others—and the development of methods suitable for clinical application with these new drugs.

<i>Product</i>	<i>Specimens</i>		
	<i>Received</i>	<i>Tests Done</i>	<i>Rejected</i>
Penicillin	2956	2503	10
Streptomycin	476	1268	25
Disinfectants	301	241	61

### SECTION OF VIRUS DISEASES

One of the functions of the Laboratory of Hygiene is to provide aid to the provinces for the laboratory diagnosis of virus diseases. Owing to the multiplicity of the various tests that have to be carried out for this purpose, and the high degree of specialization that exists in the few Canadian virus laboratories, the Laboratory of Hygiene has arranged a programme of collaborative efforts for the study of virus infections. Such a programme includes all the virus laboratories in Canada.

Towards the end of the fiscal year, the department was fortunate in securing the services of a qualified medical officer specialist in virus diseases, thus enabling the Laboratory of Hygiene to participate actively in clinical and field investigations.

In March, an epidemic having the clinical features of paralytic poliomyelitis occurred at Chesterfield Inlet, Northwest Territories. A joint effort by the Connaught Medical Research Laboratories, the Laboratory of Hygiene and other government agencies, was made to determine the cause of the outbreak and to study the epidemiology.

Facilities for detecting epidemic influenza were extended. The Laboratory of Hygiene is participating in the World Health Organization Influenza Study Programme, and is also collaborating with the Influenza Information Centre in the United States\*. Arrangements were made with a local institution towards the end of the year for influenza investigations in the Ottawa area.

A service for the routine laboratory diagnosis of smallpox has been established. Specimens of smallpox vaccine offered for sale in Canada have been tested for potency as required by the regulations of the Food and Drugs Act. All were found to be satisfactory.

### WESTERN BRANCH, KAMLOOPS, B.C.

This year notes the tenth anniversary of the establishment of the laboratory at Kamloops, work having been started here in April, 1939. The work initiated at that time, i.e. the study of tick-borne and insect-borne diseases, has been pursued each year and additional studies and services have been undertaken as time and opportunity have permitted.

The operation of the laboratory during the past year has been beset with difficulties. In May and June serious floods occurred. The laboratory grounds were inundated to a depth of three feet. Water to a depth of 28 inches covered the floor of the infected animal house, and during most of the month of June the only method of transportation to the laboratory was a rowboat equipped with an outboard motor. By this means the laboratory staff and all supplies (animal feed, express parcels, and other items) were conveyed each day to and from the laboratory for a distance of over two miles on the Thompson river which, in flood, is very swift, treacherous and frequently very rough.

The laboratory water supply, long a perplexing problem, became a serious matter with the silting up of the well that occurred during the flood. An attempt was made in the fall to drill a new well but this proved impractical because of the

\*Bull. #9, February 4, 1949, from Influenza Information Centre on file #353-5-28

soil and was abandoned after a depth of about 90 feet had been reached. During the cold winter weather the water level of the well dropped to below the sand level and it was with difficulty that sufficient sand was removed to provide enough water to keep the heating plants and the laboratory in operation. An attempt is now being made to sink a new well with a metal cribbing surrounded by gravel which, it is hoped, will keep out the sand. If this is even partially successful it should be adequate for a few years but the problem of obtaining a satisfactory water supply will, it seems, always be a drawback to this location.

The past winter was unusually severe and transportation again proved a problem. The road repeatedly became blocked with snow, necessitating abandonment of cars a mile to a mile and a half from the laboratory. Supplies of fuel oil and animal feed ran dangerously low before the road could be cleared. With the spring thaw the condition of the road became worse. Cars and trucks bogged down and had to be hauled out by tractors. Several places became impassable quags. These problems, although purely matters of operation, hampered the efficiency of the laboratory and had an unhealthy effect on the work, tending to emphasize that the present laboratory site is quite unsuitable.

### *Plague*

In British Columbia plague surveys were continued as in previous years and, for the first time since 1942, were extended to the interior during the summer months. No evidence of plague was found in this province. Surveys were not carried out in Saskatchewan this year.

In Alberta, surveys were conducted by the Provincial Health Department and the specimens were submitted to this laboratory as in previous years. Plague infection was encountered again in fleas submitted from ground squirrels taken near Tilley, east of Brooks. Details of the number and type of specimens examined are shown in Table 16, page 159.

### *Pasteurellosis*

*Pasteurella multocida* was encountered a number of times in rat tissues submitted from piggeries in the Vancouver area. It appears that this organism is a normal inhabitant, a harmless parasite, of the rodents found in this area. It was observed on the same premises on two previous occasions but so far has not been met with in other localities. In the guinea pig it shows unusual virulence and interferes seriously with attempts to pick up plague infection since it kills the test animals in 24 to 48 hours or before plague has had time to develop. Pseudotuberculosis (*P. pseudotuberculosis rodentium*) was encountered twice in rat tissues taken in this same area and once in tissues submitted from West Vancouver.

### *Rocky Mountain Spotted Fever*

Several thousand ticks (*Dermacentor andersoni*) submitted from various points in the interior of British Columbia and from southern Alberta were examined but no evidence of spotted fever was uncovered in either province this year.

### *Tularemia*

This infection was encountered in a pool of drag (adult) ticks submitted from near Foremost in southern Alberta and also in a rat (*Rattus norvegicus*) submitted from a piggery in the metropolitan area (Richmond municipality) of Vancouver. The latter finding is of interest in that it is the first time tularemia has been encountered in this area and further in that it has been discovered in a Norway rat, a host in which the disease rarely occurs. See Table 17, page 160.

### *Leptospirosis, Rat Bite Fever and Other Studies*

This year an attempt was made in conjunction with the plague survey of the coastal area to determine to what extent certain other rodent-borne infections, particularly leptospirosis (infectious jaundice) and rat bite fever occur there. As

leptospirae do not survive long in dead tissues, it was necessary for this study either to ship the live rodents to the laboratory for autopsy and injection into guinea pigs or to ship the guinea pigs to the coast, make the inoculations there and then return the animals to the laboratory. Both methods were employed and in this way the kidneys of 121 rats captured at various points in the Vancouver area and on Vancouver Island were examined.

From most of the rats, heart blood was also taken for serological test and from those shipped alive to the laboratory kidney sections were taken for darkfield examination and culture on Verwoort's leptospira medium. In none was leptospirae discovered by guinea pig inoculation and in none could conclusive evidence of leptospiral infection be found by either the darkfield or culture method.

A culture of *Leptospira icterohemorrhagiae* was obtained from the National Institute of Health, Washington, D.C., for the preparation of diagnostic antigen and attempts are now being made to detect the infection by means of the agglutination test. While so far no evidence of leptospirosis has been found a surprisingly high percentage of rat bite fever (*Spirillum minus* type) infection has been uncovered. Details are shown in Table 18, page 160.

Specimens of 23 of the rat sera collected were submitted to Dr. Joel Warren, Army Medical School, Washington, D.C., at his request, for complement fixation test for encephalomyocarditis, a new virus disease which, it appears, may be widespread. Dr. Warren's report, however, states that no evidence of the infection was found in the sera submitted from this laboratory. In addition, samples of 49 of the rat sera were sent to the Rocky Mountain Laboratory, Hamilton, Montana, for a complement fixation test for murine typhus. The report on this work is not yet available.

Since October, the diaphragms of all rodents autopsied have been removed for examination for evidence of trichinosis. At first these were submitted to the Animal Pathology Laboratory, University of British Columbia, but now are being shipped to the Laboratory of Hygiene, Ottawa, for examination in the Section of Parasitology.

### *Q Fever.*

During the summer some 143 guinea pigs, previously used for the examination of rodent tissues, ticks, and ectoparasites, were bled and the sera submitted to Dr. R. R. Parker, Director of the Rocky Mountain Laboratory, who kindly volunteered to have complement fixation tests carried out for evidence of Q fever. It was suggested that since the causative agent of Q fever is found in ticks and possibly also in certain insects and rodents such tests might be a means of detecting reservoirs of this infection. Some of the sera submitted gave questionable reactions but no definite conclusions could be drawn.

### *Special Studies*

During the course of the year several special tests were carried out as aids to physicians who had patients with puzzling symptomatology. These included tests for tularemia, *Brucella abortus*, lymphocytic choriomeningitis, relapsing fever, and tuberculosis. A few cultures of *Mycobacterium tuberculosis* were received from Coqualeetza Indian hospital for typing and one was received from Ottawa.

### *Diagnostic Antigens*

The production of *Brucella abortus* antigen together with control sera for the agglutination test has been continued and is supplied to provincial and other (D.V.A.) laboratories on request. This service, with the various tests that must be carried out to check the antigen for purity and reliability, requires a good deal of time and is becoming a heavy load for the laboratory's limited staff and equipment. A total of 455 cc. of concentrated antigen, equivalent to 45 litres of stan-

standardized suspensions, were distributed to provincial public health laboratories and Department of Veterans Affairs hospital laboratories during the past year. In addition, antigen was supplied to the Winnipeg General Hospital and to the Provincial Laboratory, Newfoundland.

In August this laboratory, in cooperation with the Division of Entomology, was host for three days to the International Northwest Conference on Diseases of Nature Communicable to Man. Twenty delegates—physicians, veterinarians, entomologists, and bacteriologists—attended from such widely-separated places as, Hamilton, Mont., San Francisco, Cal., Atlanta, Ga., Boston, Mass., Ottawa, Ont., and Zurich, Switzerland. The papers presented and discussions that ensued, on rickettsial and other diseases, conditions with which this laboratory is vitally concerned, proved most interesting and profitable.

#### TECHNICAL ADVISORY COMMITTEE ON PUBLIC HEALTH LABORATORY SERVICES

The annual meeting of the Technical Advisory Committee on Public Health Laboratory Services was held in Ottawa on December 9 to 11 inclusive. In addition to the regular members there were present Dr. Josephson, Director of Public Health Laboratory Services, Newfoundland, and three technical consultants, Professors A. Frappier, University of Montreal, G. B. Reed, Queen's University, and E. G. D. Murray, McGill University.

The committee stressed the acute shortage in Canada of adequately trained bacteriologists and the dangerous situation created by this shortage in the proper functioning of the public health laboratories. Measures to overcome this difficulty were considered and in order to provide the necessary facilities, which are at present lacking at the universities, for the training of such professional personnel, it was recommended that either by allocation of funds from the existing public health grants or by additional grants by the Federal Government, the Departments of Bacteriology of those Canadian Universities undertaking this training be furnished with means for such increase in space, equipment and personnel as will permit the specialized instruction of such professional bacteriologists.

The committee further stressed the increased demands which the federal public health grants were making on the already overburdened provincial public health laboratories and recommended that every allocation of funds for extension of services be accompanied by the assignment of an appropriate portion of the grant to provide the additional services required of the provincial laboratories.

The dangers of the inadequate performance of public health laboratory tests used in the diagnosis or control of treatment of disease were emphasized, and the committee recommended that the Dominion Council of Health be requested to consider the enactment of legislation requiring that such laboratory tests be performed only by laboratories approved by the provincial departments of health concerned.

Establishment of the National Tumour Registry at the Laboratory of Hygiene under the auspices of the National Cancer Institute was announced and the Registrar, Dr. Desmond Magner, described the activities, proposed plans and hopes of the Registry.

The committee approved the establishment of a National Salmonella Typing Centre at the Laboratory of Hygiene. The members were informed that this laboratory was now prepared to receive cultures of Salmonella for type identification. It was also agreed that the provinces would collaborate with this Centre in the study of Salmonellosis in Canada.

The Laboratory of Hygiene, on request of the committee, agreed to supply to the members the following reagents and services: (1) standardized agglutinable suspensions of certain Salmonellae and Brucellae; (2) the typing of *C. diphtheriae* cultures; (3) Lancefield grouping sera for groups A, B, C, and G Hemolytic strepto-

cocci and the serological typing of Hemolytic streptococcus cultures; (4) one hundred per cent of the requirements of the provincial departments of health for complement for syphilis complement fixation tests; (5) a refresher course on the sero-diagnosis of syphilis for senior technicians from the provincial laboratories, and (6) a laboratory diagnostic service on parasitological specimens.

The committee decided that a study of amoebiasis in Canada should be undertaken and agreed to collaborate with the Laboratory of Hygiene in such a study. The laboratories of the Quebec and Ontario Departments of Health agreed to type by means of phage all cultures of *S. typhosa* submitted.

In the field of virus studies, collaboration between all those laboratories in Canada studying virus problems was urged and the members agreed to assist in a collaborative study of influenza by the Connaught Medical Research Laboratories and the Laboratory of Hygiene.

The committee again expressed its deep concern over the lack of epidemiologists in Canada and the consequent serious effect on the proper development of public health control in the Dominion.

## SECTION OF ADMINISTRATION

### *Establishment*

At the present time, the establishment of the Laboratory of Hygiene stands at a total of 94 positions which may be classified as follows: professional staff, 31; technical staff, 25; administration and office staff, 10; labourers, 20; student assistants, 4; seconded (Library, Central Registry) 4.

The Administration Section of the Division is composed of various service units:

*General Office* During the past year a supervisor was added to the establishment in order to make more efficient use of all clerical and stenographic staff. This section has undertaken a large portion of the technical work formerly handled by technical officers.

*Work-shop* This section completed 277 projects ranging from the renovation of the sheep shelter to building and installing much needed shelving. All animal cage units required by the division are fabricated. One of the items included in the completed projects was for 30 cage units. This one project has more than paid for the total overhead of the shop.

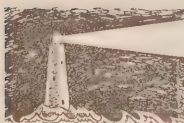
*Stock Room* This service is now in full operation and has in stock, or on order, minimum requirements for the year's operation.

*Library* The departmental librarian is responsible for the administration of the laboratory library which is operated as a branch of the central library of the department.

*Central Registry* This unit was moved from the main office to an inside room to provide for additional space urgently required.

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## MENTAL HEALTH



The most important single development in the history of mental health work in Canada occurred during the past year in the establishment by the federal government of a large grant to the provinces for the extension of mental health services and, ultimately, the provision of free treatment for patients in this health field.

In the fiscal year 1948-49 the grant to the provinces was \$4,000,000. This is to be increased by \$1,000,000 every two years, to a maximum of \$7,000,000, if the provinces demonstrate ability to use these amounts effectively. During 1948-49

projects from all the provinces, numbering 224 and amounting to \$1,142,318.11, were approved. A few additional projects were rejected on various grounds.

Advice concerning administration of this grant was provided by the department's Mental Health Division, which was established in December, 1945, and which, although there have been additions to its clerical force, continues to have only one psychiatrist, the Chief of the division, as its technical staff.

Adequate consideration of projects has required the bulk of the time of the personnel of the division. It has called for intimate knowledge of the present mental health facilities of each province and appreciation of the lines of development which should now be followed in order to lead to the widest existence of good mental health in the future.

Chief uses to which the provinces have put the mental health grant funds are: (1) to provide additional staff in mental hospitals, mental health clinics and psychiatric wards in general hospitals; (2) to provide equipment for these three types of services, and (3) to provide training for personnel—psychiatrists, psychologists, nurses, psychiatric social workers—for the new services.

### *Field Stimulated*

The various sciences concerned in mental health work have gained greatly in prestige as a result of the mental health grant, which is being used for research as well as for training.

With few exceptions, the universities have seized on this opportunity for expansion of their training and research facilities in the fields of knowledge which contribute most directly to mental health work. As a result of the grant, the number of mental health clinics in Canada has practically doubled in the past year, and there has been a new spirit of encouragement in the mental hospitals' staffs.

The Advisory Committee on Mental Health, the constitution of which was described in the 1947-48 Annual Report, held two meetings during 1948-49, on June 28 and 29 and on October 25 and 26. Preceding the June meeting the Subcommittee on Training met for one day and made recommendations as to the use of grant funds for training purposes. The Subcommittee on Research and Statistics met prior to the October meeting of the Advisory Committee and made recommendations regarding use of grant funds for research purposes.

In addition to consideration of various uses of the mental health grant, the Advisory Committee recommended that a central registry of mental hospital patients be established: that a patient-census, by age and sex on a set date, be undertaken in all mental hospitals of the country, and that further study be given to methods of gathering information on the activities of mental health clinics and other services apart from the mental hospitals. It was decided that standards of floor space per patient in mental hospitals should be established and that information on the mental hospitals' facilities in these terms should be obtained.

## INFORMATIONAL WORK

Child training pamphlets produced by this division, through the department's Information Services Division, continued to be very popular with public health personnel and social workers as well as with parents. Additions were made to the list by the production of new pamphlets on *Temper, Fear and Sex Instruction*. Manuscripts were prepared on *Thumb Sucking, Lying and Stealing, Stammering and Nervous Habits*. A Mental Health supplement to *Canada's Health and Welfare* was produced, giving a general view of mental health problems and facilities in Canada. Illustrations in this publication were especially apt.

A manuscript on *The Home Care and Training of the Backward Child* has been edited and revised. This booklet will appear in print during the Summer of 1949. Another booklet on the training of the normal child, *Up the Years—One to Six*, has been completed and will be in print by Fall, 1949.

During the year the first two films in the Mental Mechanisms series, *The Feeling of Rejection* and *The Feeling of Hostility*, continued to meet wide acclaim. These have been found very useful in professional education of mental health workers, social workers and teachers, as well as in parent education. The phenomenal number of 327 prints of *The Feeling of Rejection* have been sold to universities, provincial health departments and other agencies. These films have been seen by many thousands and have had, it is safe to say, wide influence on public thinking with regard to child training and mental health. The third film in this series, *Over-Dependency*, is to be released in May, 1949.

A 15-minute film in colour on children's eating problems, entitled *Why Won't Tommy Eat?* was produced by this division and has attained wide acceptance on the part of young parents. In an effort to present to parents the normal emotional development of children, a series of films entitled *Ages and Stages* has been begun. The first in this series, *He Acts His Age*, is due for release in May, 1949. Scripts have also been prepared for films on the emotional development of two to three-year-old children and of four to five-year-olds. French versions of *The Feeling of Rejection*, *The Feeling of Hostility* and *Know Your Baby* were produced during the year. They aroused wide appreciation.

As part of the public educational effort in mental health, the Canadian rights to a series of radio programmes produced by the National Mental Health Foundation were purchased by the department. These were broadcast by the Canadian Broadcasting Corporation on its Trans-Canada network. The programmes dealt with common mental health problems, in dramatized form and in discussion.

### CONSULTANT SERVICES

Consultant service was rendered by the Mental Health Division to the Narcotic Control Division, Immigration Medical Service, Hospital Design Division, Civil Aviation Medicine Division and Indian Health Services of the Department; to the Department of National Defence, the National Film Board, the Department of Mines and Resources and the Dominion Bureau of Statistics.

The Chief of the Division has been a member of the Technical Advisory Committee on Narcotic Drug Addiction from its inception. The principle of establishing a treatment and research centre on drug addiction has been approved by the Minister and a search is being made for a suitable site.

All the provinces were visited in connection with the use of the Mental Health Grant. The Chief of the Division addressed the annual meeting of the Nova Scotia Mental Hygiene Society, the School Improvement League of Prince Edward Island, the annual meetings of several welfare organizations and many parent-teacher associations. He was appointed to the Associate Committee on Applied Psychology of the National Research Council and to the Public Health Committee of the American Psychiatric Association.

#### *Professional Training*

A meeting of representatives of university Departments of Psychology and of the Canadian Psychological Association was held on December 11, 1948. Its purpose was to consider the training of clinical psychologists, in view of circumstances existing as a result of the establishment of the federal Mental Health Grant. Such problems as sharing among the universities the load of training, the levels and lengths of training courses, certification and field work training situations were discussed and agreement on these matters was reached.

A survey of psychologists' jobs was undertaken by the Canadian Psychological Association at the request of this Department. The report of this survey has been completed and will be useful to the administrators of the mental health services across Canada.

One of the most important functions of the Mental Health Division is to serve

as a clearing house of information for the provincial mental health services. This entails keeping informed of available personnel and keeping abreast of recent literature. In the field of literature on mental health, the division's pamphlet library is kept up-to-date and a very valuable collection of recent publications from the United Kingdom and the United States, as well as within Canada, is available for reference.

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## NARCOTIC DRUG CONTROL



Considerable study has been given during the past year to the complex problem of narcotism as the department's Narcotic Control Division has been active in new measures designed not only to further suppress illegal dealings in drugs but to search out possible means of reducing addiction and reclaiming its victims.

The primary function of the division is to administer the Opium and Narcotic Drug Act, which furnishes legislative authority for the control of the domestic market. The work of the division does, however, extend beyond this point, because the closest relation is maintained with other countries which have ratified the various narcotic Conventions in a common effort to suppress, and if possible eradicate, the illicit narcotic traffic.

Moreover, as Canada does not manufacture basic narcotic supplies but imports all requirements from other countries, much time and study must be spent by officials of the division to ensure that adequate medication of a narcotic nature is available at all times to meet the medical requirements of the sick of our country.

The fundamental principle upon which such domestic control is established and maintained is that no narcotic drugs or preparations containing similar medication may be legally imported into the Dominion or exported from the country by any firm, unless a licence permitting such a transaction is first obtained from the Narcotic Control Division. In addition, narcotic drugs can only be distributed to the medical and pharmaceutical professions through the medium of firms licensed by the department to sell and distribute narcotic drugs. Monthly reports showing all sales transactions executed are received from firms so licensed and are closely checked by the staff of the division. In fact, all commitments covering straight narcotic drugs made by professional personnel entitled to obtain supplies of this nature are posted to individual purchase cards, and, in this way, the division is aware of the amounts of narcotics each physician, druggist, dentist and veterinary surgeon is using in connection with his profession.

## ADDICTION PROBLEM

At the present time there are in Canada approximately 3,500 known addicts the great majority of whom possess lengthy criminal records and almost invariably are to be found closely connected with well-known underworld characters. Addicts of this type present a serious problem for law enforcement officers because they endeavour to obtain supplies of drugs to maintain their addiction habit from illicit sources and do not hesitate to resort to criminal activities of a varied nature in an effort to gain sufficient money to pay the exorbitant prices demanded by traffickers, who take the great risk of handling narcotics.

Dealing with this menace the department, through the cooperation of the Royal Canadian Mounted Police, arranged with the National Film Board for the production of the film *The Drug Addict* and for the preparation of film strips concerning narcotics. Use will be made of this material in the training of enforcement personnel and in conjunction with lectures given to university students of

Faculties such as medicine and pharmacy, and to other interested groups, in an effort to acquaint them fully with the social and economic problems which go hand in hand with narcotic addiction.

Meetings of the Technical Advisory Committee on Drug Addiction were held throughout the year in an effort to formulate plans for the establishment of a treatment institution and, at the same time, to obtain more factual information about narcotic addiction.

### DOMESTIC MARKET

During the year the synthetic narcotic Methadone, the formula of which was originally developed in Germany and later brought to allied countries by Occupation troops, made its appearance on the Canadian market and was introduced to the medical profession. At one time it was considered that this drug would, to a great extent, replace Morphine. Insofar as the Canadian medical profession is concerned, however, the results obtained in general from the use of this drug when treating serious medical cases have been disappointing. For this reason it is anticipated that the future use of Methadone in Canada will be limited and that it will not replace the opium alkaloids to any extent.

As mentioned previously, the distribution of narcotics is controlled through the medium of licensed wholesalers and 142 firms were so licensed during the calendar year 1948. This figure represents a slight increase over the number of companies permitted to deal in narcotics during the previous year and indicates the general trend of increased business and expanding markets which Canadian pharmaceutical firms have continued to enjoy in the past few years.

#### *Auditors Active*

Monthly reports of narcotic sales were received regularly from all licensed wholesalers. This information forms a very important link in the chain of control maintained over the domestic market. In addition two departmental auditors, who are pharmacists, checked the stocks and records of a considerable number of licensed wholesalers during the year.

These auditors also made more than 600 visits to hospitals throughout the Dominion in the year under review to determine whether the required degree of control was being observed over narcotic stock. In view of their intimate knowledge of narcotic matters in Canada, the auditors were in a position to offer hospital authorities constructive suggestions as to steps which should be taken to safeguard narcotics in order that hospital supplies might not be diverted to the illicit market through theft. This type of work, commenced only within recent years, has paid rich dividends. Fewer hospitals have been victimized, due to improved protection methods they have instituted following visits of departmental auditors. In fact, the results achieved have been so gratifying and encouraging that it is the intention of the division to intensify efforts along these lines during the coming year.

Additionally, auditors this year interviewed several physicians who, although not suspected of trafficking in narcotic drugs, were known to be confronted with personal addiction problems and were clearly in need of departmental assistance in adjusting matters.

#### *Retail Stocks*

All retail druggists are obliged to maintain complete and accurate records of narcotic transactions. Officers of the Royal Canadian Mounted Police, acting on behalf of the department, inspected the records of practically every drug store in Canada during the year and, when irregularities were found, the matter was reported to the department. This situation was then taken up by correspondence with the druggist. In the majority of cases the unsatisfactory conditions were adjusted satisfactorily by an exchange of correspondence but in some instances the department was forced to resort to administrative action before conditions were corrected.

The control gained through the inspection of narcotic records of retail druggists by Royal Canadian Mounted Police is supplemented by obtaining periodical sales reports from druggists covering a three-month period. In the rural areas these reports are limited to one year, but in the urban centres, where addicts are known to reside, every effort is made to have at least two reports reach the department yearly. The information contained in all the reports is carefully checked and, in the event of it being discovered that an individual is obtaining narcotic medication for a continuous length of time, a letter of enquiry is directed to the physician who is making the medication available. In a very large number of instances it is established that a serious medical condition is present, requiring the administration of narcotic drugs. In a number of such cases, however, worthwhile information about addicts has been uncovered.

#### *Drug Licences*

Applications to import narcotics were received from various licensed wholesalers and 109 licences were granted. Importations consisted chiefly of basic narcotic supplies which were obtained from Great Britain and the United States.

No appreciable change was noticed in the amounts of narcotic preparations exported by Canadian manufacturers during the year. In all 182 licences were issued permitting the export of narcotic medication and, as in the past, Newfoundland received by far the greatest portion of the supplies authorized to be exported. Complete statistics in respect to the amounts of narcotic drugs involved in both imports and exports and the countries connected with these transactions are shown in tables 22, 23 and 24, pages 164, 165 and 166.

Revenue received from fees for licences issued, penalties imposed and seizures under the Opium and Narcotic Drug Act amounted to \$26,519.51. This amount represents approximately twice as much as that obtained during the previous year, and of course, is related directly to the number of narcotic convictions. Professional fees paid for legal services in the prosecution of narcotic cases totalled \$40,392.25.

#### *Training Course*

Following procedure established previously, a course of instruction was conducted by the division for Royal Canadian Mounted Police officers who, during their course of duty, are called upon to carry out the inspection of narcotic records maintained by retail druggists. The class was comprised of ten members and convened for a 30-day period. The objective was to familiarize class members with all narcotic regulations relating to the retail drug trade in order that they would be in a better position to advise and instruct druggists on various points pertaining to narcotic regulations and control which develop from time to time as the result of inspection work.

The closest cooperation was given to the division by registrars and other officials of all the provincial medical and pharmaceutical colleges and associations. With assistance of this nature the work of the department is greatly facilitated. Appreciation is also due for the cooperation the division received from physicians and druggists throughout the Dominion. There are approximately 11,000 doctors and 4,000 retail druggists in Canada and Narcotic Control is in frequent correspondence with many of the members of these professions.

### ILLICIT TRAFFIC

The availability of heroin in increasing amounts on the illicit market during the past year gave the department much concern. Concentrated effort was initiated, however, to determine how the material was entering the country and to lead to the apprehension of those associated with this insidious traffic. Unquestionably, when ample supplies of narcotics are found on the illicit market, convictions increase, although it does not necessarily follow that addiction in the country has increased in the same proportion. On the contrary, to an appreciable extent the

increase in narcotic convictions can be attributed directly to the effective work of enforcement officers and to the fact that, when supplies of narcotics are available, known addicts simply cannot resist the opportunity of satisfying their appetites and are willing to take the great risk of having drugs in their possession.

### *Heroin Seizures*

One of the largest seizures of heroin in Canada's history was made at Vancouver during the month of December, 1948, when Royal Canadian Mounted Police officers arrested a man in possession of approximately 32 ounces of the drug. This case was developed after information was received by enforcement personnel to the effect that an individual who had arrived in Vancouver was endeavouring to dispose of large quantities of heroin through underworld channels. After ceaseless effort by officers assigned to the investigation, the trafficker was located and arrested in possession of the large quantity of heroin. Subsequently he was convicted of a breach of the Opium and Narcotic Drug Act and was sentenced to five years' imprisonment and a fine of \$200. Unlike much of the heroin found on the illicit market during previous years, the drug involved in this case was of exceptionally high quality. However, it was not possible to establish by what means the heroin had entered Canada, nor the country of origin.

Another interesting narcotic case involving the illegal possession of heroin occurred in the city of Hamilton. The attention of Royal Canadian Mounted Police officers was directed to the activities of two men and a young woman suspected of having associated with a fourth individual who had been arrested while attempting a pay-roll robbery involving thousands of dollars. The hotel room occupied by the woman and one of the men concerned was searched and a quantity of heroin discovered. The pair were arrested and charged with a narcotic offence. When they appeared in court bail of \$10,000 each was set. Then it was discovered that additional supplies of heroin had been held at another location by the individuals concerned. Accordingly, enforcement officers attempted to locate and re-arrest all three. Only the third man could be found, however, the others having absconded.

Eventually, the man and woman who had jumped bail were located in Cincinnati, Ohio. When United States federal agents went to a hotel to take them in custody a gun battle ensued and the wanted man was killed. The girl was deported to Canada and was later sentenced to one year in jail, fined \$300 for the narcotic offence, and also sentenced to one year imprisonment for absconding bail. The third man was also tried for breach of the Narcotic Act and pleaded guilty. He was sentenced to three years and nine months and fined \$200.

### *Other Cases*

At the present time the general use of opium by addicts is practically non-existent in Canada and last year there was not a single conviction involving the smoking of opium. Occasionally, however, a seaman attempts to smuggle supplies of opium into this country, hoping to make some easy money.

Approximately three pounds of crude opium were seized from a seaman in Montreal during May, 1948, shortly after his ship docked from the Orient. It is believed this opium was originally purchased in Calcutta, India.

The use of marihuana had not previously presented any serious problem in the Dominion, in fact the number of convictions for the illegal possession of marihuana in former years was small. It is significant to note, nevertheless, that several marihuana cases were encountered in Canada during the past year and investigations indicate that at least some of these supplies were smuggled into Canada from the United States.

Royal Canadian Mounted Police in Montreal received information on one occasion that a musician who had played in several well-known American orchestras was furnishing entertainers in certain types of Montreal night clubs with marihuana cigarettes. This man was arrested with more than 100 marihuana cigarettes and

approximately two ounces of the bulk weed. Undoubtedly, he had distributed a number of cigarettes before being apprehended. He was found guilty of illegal possession of marihuana and sentenced to one year in prison and fined \$200 or in default an additional month in jail.

### *Narcotic Thefts*

Although the bulk of narcotics on the illicit market enters the country illegally, some supplies are also diverted from legitimate sources as a result of thefts from professional people and from institutions using narcotics for the treatment of the sick. To reduce losses of this kind special attention is being given to the type of protection facilities provided for the safeguarding of narcotics and when the department finds that sufficient security is not maintained over narcotics by any individual, institution or firm entrusted with these drugs, the situation is brought forcibly to the attention of those concerned. Improved protection is insisted upon, otherwise they are called upon to surrender their narcotic stock. In addition, Royal Canadian Mounted Police and other police officials have rendered inestimable assistance in keeping narcotic thefts to a very low level.

## CRIME AND CONVICTIONS

There were 259 convictions under the Opium and Narcotic Drug Act during the judicial year ended September 30, 1948, as compared with 262 in the preceding year (see tables 19 and 20, pages 161 and 162). Convictions arising from possession charges totalled 238, while 14 cases related to offering, distributing or selling narcotics. Included in this latter category were two cases involving physicians, whom it became necessary to prosecute for supplying large quantities of narcotics to individuals under conditions which could by no means be considered either legal or ethical. In one instance the doctor was sentenced to five years in the penitentiary while the other physician received a three-month sentence.

Likewise, one dentist and two nurses were convicted of narcotic offences and sentenced to terms of imprisonment.

Apart from the number of convictions registered under the Opium and Narcotic Drug Act, there were four successful prosecutions in relation to narcotics under the Criminal Code of Canada in the judicial year ended September 30, 1948.

Of the 259 convictions obtained, 252 were initiated federally and seven by provincial and municipal authorities.

The greatest number of convictions, 104, was registered in Ontario, while 103 convictions obtained in British Columbia. The next highest number was in Quebec, where 22 cases were successfully concluded, 17 were in Alberta, eight in Saskatchewan and five in Manitoba. There was not a single narcotic case in the three Maritime Provinces.

In the past the use of narcotic drugs was generally associated with Orientals. However, Canada's Oriental population no longer presents a serious problem in respect to narcotics. As a matter of fact, of the 259 convictions in the past judicial year only one Chinese was prosecuted, compared with 255 persons giving their racial origin as British and American.

### *Statistics*

As in past years, and in order that complete statistics might be included in this report, all the figures set forth above respecting convictions cover the judicial year ending September 30, 1948. It is necessary to follow this procedure to provide ample time for municipal and provincial narcotic cases which are not always brought to the attention of the department immediately, to be reported to the Bureau of Statistics and to allow for the inclusion of this information in statistics of the division.

Additional convictions were also registered under the Opium and Narcotic Drug Act in the last six months of the fiscal year. As a matter of fact, a total of 174 were obtained in this period under the Narcotic Act, and there were five other successful prosecutions respecting narcotics under the Criminal Code of Canada. These figures clearly reflect the availability of considerable narcotics, particularly heroin, on the illicit market. Concerted action is being taken in an effort to correct this unsatisfactory situation.

A noticeable decrease in the number of thefts of narcotics from legitimate sources was evident during the fiscal year 1948, there being only 107 as compared with 163 in the previous year. This situation clearly indicates that the efforts put forth by the department to educate physicians, druggists and hospital authorities to the great need for providing proper and adequate security for narcotic supplies have borne fruit. The breakdown of these thefts is as follows: retail druggists, 31; physicians, 54; hospitals, 17; government hospitals, etc., 3; wholesalers, 2. Of the total thefts from physicians, 37 were the result of doctors' medical kits being pilfered when left in the physicians' automobiles. In most cases, however, the amounts of narcotics stolen by the culprits represented very limited quantities because, as a rule, doctors keep only sufficient narcotic medication in their kits to meet emergencies.

### *Sentences*

Sentences of one year or over imposed during the judicial year ending September 30, 1948, were as follows: 50 for periods of one to two years, 58 for periods of two to three years, 11 for periods of three to four years, four for periods of four to five years, nine for periods of five to six years, one for period of six to seven years.

In addition, one individual who had a lengthy criminal record and was convicted of a narcotic offence also was charged under the Criminal Code with being a habitual criminal and was sentenced to an indeterminate period in penitentiary. It is of interest to note that this conviction was the first to be registered in Canada under a new section of the Criminal Code. A similar case developed between September 30, 1948 and March 31, 1949, and the accused, who had been known to be living a life of crime, was also convicted as a habitual criminal after being found guilty of the illegal possession of the narcotic drugs. The full use of this particular section of the Criminal Code in relation to narcotic offences will undoubtedly act as a deterrent to addicts and particularly to traffickers. It is, of course, the intention of the department to use this stringent piece of legislation when circumstances warrant, and it is anticipated that it will prove a very useful weapon in the continued effort to suppress the illicit traffic.

Of the 259 convictions under the Narcotic Act, it is of interest to observe that 178 of these were in relation to possession or selling of heroin and only 18 were in relation to possession or selling of opium, while 47 involved morphine. This seems to indicate that addicts in Canada have a marked preference for the potent and so-called "white" drugs and the smoking of opium is rapidly becoming a thing of the past. Complete statistics respecting the total amounts and types of narcotics seized or received from illicit channels during the calendar year 1948 are given in Table 21, page 163.

Sixteen aliens were deported during the year after serving terms of imprisonment for narcotic offences. The racial origins of those deported were: 13 Chinese, one German, one Italian, one U.S.A., and a total of 1364 aliens has now been deported since legislation providing for the deportation of aliens convicted of a narcotic offence was enacted.

### *Racetrack Tests*

To stamp out the use of narcotics entirely in connection with race-track activities, saliva tests were carried out at a number of leading tracks by highly qualified personnel during the period under review. Positive reaction for narcotics

was not obtained in a single test. To supplement this type of work all personnel and equipment accompanying race horses entering Canada were checked closely for narcotics by Royal Canadian Mounted Police before being permitted to pass through Customs.

So that it will not be possible for narcotic medication to enter Canada from the Orient under the guise of purposely mislabelled medicines, Dominion Analysts test all Chinese medicine arriving in this country, irrespective of whether the affixed label indicates that the formula does not contain narcotics, before it is released from Canadian Customs. Within recent years, however, little if any serious difficulty has been experienced in this connection.

Considering the fact that 97 per cent of the narcotic cases resulting in conviction were handled by the Royal Canadian Mounted Police, great credit is due to all members of the force for their effective and untiring efforts. This is particularly true in respect to members of the Narcotic Squads located in the larger cities where the illicit traffic is concentrated. They are constantly encountering difficulties and situations, and their work calls for unlimited patience, personal courage and, in every instance, a high degree of intelligence.

### INTERNATIONAL CO-OPERATION

Since Canada has ratified all the International Conventions relating to narcotics, she is obliged to supply the established international supervisory bodies with a considerable amount of detailed information respecting existing narcotic problems and control maintained over such drugs within the Dominion. For example, the estimated requirements of narcotics to meet the medical needs of our population must be submitted annually, well in advance of the ensuing year.

In addition, regular reports are supplied to the Secretariat of the United Nations covering all important narcotic cases developing within the Dominion, particularly if there is any international significance to a case. Complete details are also supplied regarding the quantities of narcotics and preparations containing this medication which are imported or exported, as well as the amounts of all important drugs consumed for medicinal and scientific purposes, per annum, within Canada's boundaries.

Co-operation with the narcotic services of other countries, notably the United States, Great Britain and India, continued on a very satisfactory scale and it was again abundantly demonstrated how important is the exchange of information between countries and what benefit accrues from assistance given by narcotic authorities in various parts of the world.

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### NUTRITION



The Nutrition Division helps to define the extent of national nutrition problems and contributes towards their solution by carrying out services which seem to be the logical field of a federal office and by providing services and educational material, on request, to provincial health departments.

To facilitate administration and programme planning, the internal organization of the division is divided into four sections, research, nutrition education, group feeding and reference. Much of the work of the division in the past year was the result of combined effort of personnel in the various sections, but is here described under the section which was largely responsible for various undertakings.

Three of the division's projects were of particular interest. A national educational effort concerned with Vitamin D was sponsored during the past year. This was a necessary undertaking on the basis of dietary surveys which revealed that half the children studied had received no source of vitamin D and clinical examina-

tion of the children had indicated old rickets in 11 percent of them. The educational effort undertaken involved the preparation of informational material showing the need for, and promoting the use of, Vitamin D.

Another project sponsored by the division and carried out by the Canadian Education Association, was a study of the basic curricula and procedures used in teaching nutrition in Canadian schools. Such instruction, of course, is a provincial matter, but the results of this study are expected to provide much useful information for the division in preparing future educational material.

A nutritionist was again sent, this year, to Timmins, Ont., the Porcupine Health Unit having requested a revisit after the follow-up programme carried out in 1947. The nutritionist worked mainly with teachers and school children during three weeks with the Unit.

### RESEARCH

The research section worked on a variety of projects during the year. The nutrition survey in the Foothills Health Unit in Alberta was completed in the Spring, results of the dietary, biochemical and clinical studies being assessed and a comprehensive report prepared. A popular summary of this report was provided for every family in the Health Unit.

During April, May and June, a dietary survey was carried out in five Ottawa Separate Schools in conjunction with a large-scale dental study in progress. Diet records and information concerning food habits were obtained from 487 pupils in Grades 1, 2 and 3. Subsequent studies were made of saliva samples obtained from selected groups of the children taking part in the survey.

A long-term project was commenced in September in six representative Indian residential schools. The objective of the study during the first year was to obtain a complete picture of food supplies and food service in the participating schools, as well as information concerning the nutritional status and food habits of each child. Records have been kept of all food purchases, foods produced on school farms and of gifts. Monthly menus have been studied. Individual diet records have been kept by the children for three weekly periods, at different seasons, with a fourth record to be kept before end of the school year. Records were obtained from 922 pupils ranging in age from five to 18. Their nutritional condition has been evaluated on the basis of two different clinical and biochemical examinations. On the basis of information obtained this year, various educational and supplementary feeding programmes will be introduced in the different schools. It is hoped that the results of these studies will point the way for the improvement of the health of all Indian children.

The division, in addition, has set up a new service whereby nutritional examinations are given to employees referred to it by the Nursing Counsellors of the Civil Service Health Division of the department.

### EDUCATION

The production of educational material is of primary importance to this section, since, at the Dominion-Provincial Nutrition Committee conference each year, the division undertakes to produce certain new items and to reprint some old ones. This entails agreement with the committee members as to the materials needed for the following year and collaboration with them at various stages of production so that there is general satisfaction with these materials.

New material produced, in French and English, during the year consisted of the following pamphlets: *Good Red Blood*; *Nutrition Bulletin*; *Stanley Takes a Trip*; *Vitamin D—the Problem*; *Make Every Day Vitamin D Day*; *Foothills' Survey Report*; *Nutrition Supplement*, and also an abridged filmstrip *Peppo* and Vitamin D posters in three sizes entitled *Growing*. Several other printed items were revised and re-issued, as was all mimeographed material.

Assessment of the value of all educational material produced has been undertaken wherever possible. Various projects were carried out with reference to new material and to effect a better method of evaluation. School lunch work was promoted in a series of monthly bulletins prepared for use in provincial teachers' magazines, and various exhibits, large and small, were produced during the year.

### GROUP FEEDING

During the past year assistance was given, under this heading, to many calling upon the services of the division. Advice was extended to the following:

- the Hospital Design Division of the Department, in kitchen lay-out of those hospitals applying for Health Grants, as well as other hospitals submitting plans before the National Health Programme became effective. (In co-operation with the Hospital Design Division, publications were prepared on space and equipment suggested for hospitals of various sizes);
- Indian Health Services of the Department, concerning rations for Eskimos at outposts, and quantity food storage in Indian Hospitals;
- the Indian Affairs Branch, Department of Mines and Resources, for Indian Residential School kitchens, concerning equipment and lay-out;
- Royal Canadian Mounted Police, Department of Justice, in planning of kitchen lay-out for a Mess in Montreal;
- Nautical Services, Department of Transport, in suggestions for the wording of regulations concerning food and catering on board ship and the certification of ships' cooks;
- the National Research Council, in suggesting lay-out for their newly-installed cafeteria;
- Provincial Departments of Health, with the food service in the following types of institutions (a) two large mental establishments in Saskatchewan, (b) a training school for defectives in Saskatchewan, (c) thirteen general hospitals and mental institutions in Nova Scotia (these had been visited during the previous year and help was given with specific problems when they were revisited this year), (d) a home for coloured children, a home for girls, a training school for defectives and a school for boys, in Nova Scotia, which were surveyed during the year and assisted with recommendations concerning food service, through submissions to the provincial health department;
- the Hotel Association of Canada, which had previously requested information on food wastage in homes and in public eating places (the section proceeded to outline a survey which was carried on by different associations, and tabulations were made);
- the Public Health Nurses of Nova Scotia, in discussions and in the showing of nutritional publications;
- Home and School groups in Nova Scotia, in nutrition discussion groups;
- the Pulp and Paper Research Institute, in writing *Reference Manual for Feeding Men in Camps* (not yet published);
- a High School and Vocational School, in suggesting kitchen lay-out and equipment;
- industries requesting assistance in canteen and cafeteria lay-out, equipment and food service;
- camp and welfare organizations, in organizing camp feeding (both publications, *Feeding Fifty Campers* and *Feeding Twenty Campers*, were revised in English and French and have had wide usage);
- the Ontario Catholic Hospital Association convention, with discussion period on all the dietary problems of a hospital.

*Laboratory Test Kitchen*—Construction of the laboratory test kitchen progressed during the year and the kitchen was partially in operation. Among the first projects planned for it were (a) work on the use and durability of plastic dishes, (b) the use of dried milk in bannock (requested by the Department of Mines and Resources, for Indians and Eskimos), (c) work in improving chocolate milk drink, used in Newfoundland (at the request of the Newfoundland Department of Health) and (d) the development of recipes for stews and soups for Indian residential schools, as a result of a need seen when visiting these institutions.

Publications revised included; *Feeding Fifty Campers*, *Feeding Twenty Campers*, *Vegetables have Plenty to Offer* (a combination of two other publications, *Nutritional Losses in Quantity Cookery* and *Nutritive Value of Vegetables Cooked by Ordinary Boiling Methods*, *Waterless Cooker and Pressure Saucepan*) and *Use of Chemical Preservatives*.

Among publications, a booklet has been begun aimed at instructing the hospital and convalescing patient in good eating habits. Monthly and bi-monthly material issued included: a *Caterers' Bulletin* (monthly, to all food service personnel requesting it) and *Just Between Cooks* (bi-monthly, to Indian residential school cooks).

### REFERENCE SECTION

Requests for information have been received from housewives, teachers and students, home economists, dietitians, physicians, nurses, commercial firms, hospitals and government departments. Many of these requests were for publications and were referred to the health departments of the provinces concerned, where this division's publications of general interest are obtainable.

Other requests were for advice covering a wide range of interests, such as, the nutritive value of foods, vitamins, composition of an adequate diet, budgetting, nutritional requirements of specific groups, etc. A suitable file of references was maintained by the library.

The division continued to publish the *Canadian Nutrition Notes*, containing original articles of interest to nutrition workers, abstracts of current literature in the field, and news items from all parts of Canada where nutrition work is being carried on. New publications, with suggestions for their use, were brought to the attention of nutritionists. Circulation of this Bulletin is now 8,000.

First number of the *Canadian Bulletin on Nutrition* was issued this year, giving a review of nutrition work in both private and public agencies in Canada. The second number, now in course of preparation, is to contain the Canadian Dietary Standards recently recommended by the Canadian Council on Nutrition.

Work was begun on the revision of the Table of Food Values Recommended for Use in Canada. The chief changes are, broadening its scope to include values for pounds and for servings, and estimating caloric values, according to the report of the Committee on Calorie Conversion Factors and Food Composition Tables, convened by the Nutrition Division of the Food and Agriculture Organization of the United Nations.

Members of the staff of the reference section co-operated with other sections in carrying out surveys and follow-up programmes.

### NUTRITION COMMITTEES

The Canadian Council on Nutrition continued to function as advisory body to the Minister of National Health and Welfare. The Technical Committee of the Council this year completed the setting up of a Dietary Standard for Canada.

The Sixth Annual Meeting was held of the Dominion-Provincial Nutrition Committee of the Council, when main topics of discussion concerned provincial nutrition programmes and nutrition educational materials. Work of the members of the Committees of this Council contributes much of value in the direction of the work of the Nutrition Division.

## PUBLIC HEALTH ENGINEERING



Calls upon the Public Health Engineering Division for professional service or advice were more numerous during the past year than ever before, and many complex problems required its attention.

Since this division was first formed in 1923 it has grown from a staff of a single professional engineer to a force of nineteen who are assisted by one chemist, two technicians, and several engineering student assistants. This group exercises control over many aspects of public health protection. Their duties encompass such fields as control of sanitation as it applies to the shellfish industry, certification of public water supplies and supervision of all matters of sanitation particular to carriers engaged in inter-provincial and international traffic; co-operation on matters of mutual interest with Departments of the Federal Government, Provincial Governments and the United States Public Health Service; examination of working conditions in offices occupied by civil servants; supervision of sanitation on property owned by the Dominion of Canada and construction projects financed by the Dominion.

Activities also include investigation of problems associated with water supply, sewage disposal, garbage incineration and other related problems, as they occur in the Northwest Territories, Indian Reservations, National Parks, Health and Occupational Centres, and munition plants maintained by the Dominion; participation in the activities of the International Joint Commission's investigation of boundary water pollution; design and preparation of plans for sewerage systems and sewage treatment plants when such are requested by Federal authorities.

### PERSONNEL

The strength of the staff showed a slight increase over that of the previous fiscal year with the addition of four professional engineers to fill existing vacancies. Difficulty in securing qualified professional engineers still exists. A reorganization of the offices in the Maritimes took place when the district offices at Saint John and Halifax were combined and centred at Moncton. It is expected that this move will facilitate the work of the engineers in this area by allowing the personnel to discuss mutual problems and to carry out their responsibilities more adequately as a result of greater flexibility of movement. The inclusion of Newfoundland as a province will further augment the duties of the division's representatives in the Maritimes, but the contacts made in carrying out new assignments should prove a valuable aid in establishing closer relations.

### INTERNATIONAL JOINT COMMISSION

During the past quarter-century there has occurred a vast expansion of industry on both sides of the border between the United States and Canada. This manifestation of national vigour has, to a great extent, taken place along the banks of the St. Lawrence river and the Great Lakes which form a part of the boundary between the two nations and which are the source of power and means of transportation so essential to their industries. At the same time this system also provides the source of water for domestic and industrial use.

Recognizing the many and varied purposes served by this natural resource and acutely aware of its tremendous importance to both countries, the governments of the United States and Canada have submitted to the International Joint Commission three separate references dealing with pollution resulting from the discharge of industrial wastes and domestic sewage into these boundary waters. It is hoped that the outcome of the resulting investigation will indicate what action is necessary in order to permit the fullest possible use of this great natural resource.

In order to illustrate the nature and scope of the work of this division connec-

ted with these investigations, the following facts and figures are presented. In the Detroit-Windsor and the Sault Ste. Marie areas some 10,000 analyses were made on over 3,000 water samples collected in sections studied, from Lake Superior to Lake Erie. It also involved detailed industrial surveys and special studies. The field work for these areas has been completed. The tabulation of the data and preparation of the final report is now proceeding. During this fiscal year a temporary laboratory was set up at St. Catharines to handle all work resulting from investigations made in the Niagara River area. Personnel attached to this laboratory made 6,470 chemical and bacteriological analyses on 1,712 water samples collected. Investigations along Lake Erie, the Niagara River and Lake Ontario are continuing and will probably be intensified during the year.

### SANITATION

Many of the activities of this division are directed toward duties usually considered routine, but which are of prime importance in promoting and protecting the health and welfare of the Canadian citizen and visitors from other lands. The following tabulation indicates the nature and volume of some of the work performed this year:

Sanitary surveys made re shellfish, ice supplies, coachyards, airports, passenger trains, etc.....	500;
Water samples collected for bacteriological analyses from aeroplanes, railway trains, coachyards, vessels, etc.....	6,000;
Vessel water supply systems examined.....	260;
Water supply sources examined as to treatment methods and quality.....	160;
Dining rooms examined regarding handling of food, its protection and sources for vessels, railways, etc.....	100;
Sewage disposal works examined to review control methods and check the adequacy of treatment.....	40;

In all such activities reports are submitted to the appropriate authorities with recommendations for necessary improvements or corrective measures.

This division maintains a laboratory at Vancouver, B.C., where the principal activity is the mineral analysis of water. This year 84 samples of water were analysed for total mineral content, 24 were partially analysed for total mineral content, 24 were partly analysed and 49 were analysed for fluorine content only.

Bacteriological analyses of most of the water samples collected by the division are usually performed by the laboratories of the provincial departments of health. This co-operation is of major importance in the maintenance of safe quality in supplies which are available for use by the travelling public.

The design and preparation of plans for sewerage systems and sewage treatment plants in such centres as Moose Factory Island, Ont., Coqualeetza, B.C., Fort Qu'Appelle, Sask., and Norway House, Man., were, for the most part, completed this year. Construction of the treatment plant for Coqualeetza, B.C., however, had to be temporarily abandoned due to partial destruction of the hospital by fire.

### FLOOD CONTROL—B.C.

Of special concern to the division this year were the serious flood conditions which occurred in the western provinces, particularly British Columbia, after a long cold spring followed by a sudden rise in temperatures. This condition first affected Manitoba during the latter part of April and then spread westward, reaching disastrous proportions in several areas of British Columbia. The most extensive and far-reaching damage took place in the well-settled rural valley of the Fraser River, where, early in June, the water rose to a maximum of 24.82 feet, which is approximately five feet above the danger level.

The greater part of this valley is protected by a system of approximately 200 miles of dykes constructed shortly after a serious flood in 1894. However, these had been allowed to deteriorate from neglect, since there had been no subsequent large floods except during high water in 1936, and so they were in no condition to withstand the assault of the heavy 1948 runoff.

At the request of the Deputy Minister of Health for British Columbia, the engineers of the division who are located in this region proceeded to give all possible assistance in putting public health control measures into effect. Working in close co-operation with the sanitary engineers of the province, they took steps immediately to prevent the outbreak of contagious disease. This consisted mainly of installing, operating and supervising temporary chlorinating units for public water supplies in the flooded areas. These measures were employed at the villages of Matsqui and Mission. Port Mann, Chilliwack and other centres were also closely watched, as some of their distribution mains were in the flooded areas. It is a source of great pride for all those who were immediately concerned, that no cases of communicable diseases resulted from this disaster.

### SHELLFISH CONTROL

An event of outstanding interest to the division, was the completion of an agreement between the United States Public Health Service and the Department of National Health and Welfare, relating to control measures in the handling and exporting of shellfish. This involves recognition by each party of shellfish exporters who have been duly certified by the respective governmental agencies. An increase of interest in the export of shellfish by Canadian producers may possibly be attributed to this agreement. This necessitated a considerable increase in field activities, related to control of the industry by the Public Health Engineering Division in co-operation with other federal and provincial authorities.

This division has also been represented on a research project initiated by the Association of American Railroads. Directed to the problem of waste disposal on trains, this undertaking has been in progress for about three years, and the final report, now being prepared, is awaited with interest by all in this field.

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## QUARANTINE, IMMIGRATION MEDICAL AND SICK MARINERS SERVICES



Continuation of the post-war movement to this Continent from older lands made increasing demands during the past year upon the services maintained by this Department to minimize the danger of importation of infectious disease as well as to provide medical care at Canadian ports both for passengers of incoming vessels and for seamen.

As shipping accommodation became increasingly available and as the volume of international travel grew, it became necessary to augment the staff of these services, particularly in medical officers posted overseas for pre-voyage examinations.

The rising popularity of flying as a means of long-distance transportation necessitated special attention to air ports of entry.

### QUARANTINE SERVICE

The oldest health activity of the Dominion government, the Quarantine Service, was particularly busy during the year. This agency is designed and operated for the purpose of preventing the entry of infectious disease into Canada from without, through traffic arriving by water, air or at the inland boundary. Its authority is "An Act Respecting Quarantine" and Quarantine Regulations.

Vessels are inspected on arrival during the day and, at night, on request. Radio pratique is in effect, except for arrivals from the Orient.

No cases of smallpox, typhus, yellow fever, bubonic plague or cholera were found on board vessels on arrival in Canadian ports, although these diseases were present in the ports and countries from which many of these vessels sailed. However, 96 cases of minor infectious disease, with 80 contacts, were reported.

During the year, a total of 2,741 vessels, having on board 301,183 persons, were inspected by the medical officers of this Service. Of this number, 161,118 were members of the crews, 139,476 were passengers, and 589 were distressed seamen and others.

A total of 828 vessels were inspected for vermin and rodents. Of these, 353 had come from plague-infected ports. Fumigation was carried out on 106 vessels, 376 were granted exemption certificates and 246 had their certificates endorsed. A total of 857 rats, but no mice, were recovered.

During the year, 107 vessels applied for duplicate pratique and 1,938 for radio pratique. Local customs officers, in their capacity as quarantine officers at unorganized ports, reported the entry of 25 vessels.

Additional duties were carried out, as usual, by the service's medical officers, such as medical examination of pilots and civil servants, immigration medical examination and the treatment of sick mariners.

Draft Quarantine Regulations for air travel, in relation to the International Sanitary Convention for Aerial Navigation, 1944, which were previously prepared, have received further consideration. A definite quarantine service has been functioning at Dorval airport near Montreal. Dorval is a fully organized sanitary airdrome. Satisfactory arrangements have also been made for medical inspection, when necessary, of aircraft arriving at Sydney, N.S., Moncton, N.B., Malton Airport, near Toronto, and at Sea Island near Vancouver.

Official approval has been given to agencies at which yellow fever and other inoculations may be given and certified by this Service on the International approved forms. There are now twelve centres extending across Canada, where such service may be obtained. A total of 807 inoculations against yellow fever were carried out during the year.

Aircraft, including their passengers and crew members, were subjected to Quarantine inspection following arrival from Overseas, as follows:

Dorval, P.Q.....	838
Sydney, N.S.....	685
Malton, Ont.....	127
Edmonton, Alta.....	75

In addition to the fumigation of merchant vessels, as indicated above, officers of this Service, on request of the respective Departments, fumigated various ships and shore establishments of the Royal Canadian Navy, the Marine Section of the Royal Canadian Mounted Police, the Marine Branch of the Department of Transport, Pilotage Service, and the Immigration Branch, Department of Mines and Resources.

Following the outbreak of poliomyelitis on board *H.M.C.S. Athabaska*, on request of the Naval medical authorities, the Quarantine detention buildings at William Head, B.C., were made available to the Navy until it was determined that the outbreak was under control.

A senior medical officer from the Quarantine Station at William Head was loaned for a short period to the Department of Health of British Columbia to assist the Provincial Government with their work in the flooded areas of British Columbia during the spring of 1948.

The laboratory at the Quarantine Station at William Head was again shared with the local official of the Public Health Engineering Division.

Statistics on ships boarded by Quarantine Officers during the year, with the total personnel on board, by groups, are contained in Table 25, page 167.

Detailed report on the inspection of vessels for deratization will be found in Table 26, page 167.

### IMMIGRATION MEDICAL SERVICE

Authority for the activities of the Immigration Medical Service is the Immigration Act and Regulations. The medical officers who act as advisers to the Immigration Department, in connection with the medical clauses of the Immigration Act, were originally members of the staff of the Immigration Department, but, in 1919, when a Federal Department of Health was established, these medical officers were transferred to the new department and have functioned as the Immigration Medical Service since that time.

This Service supplies medical advice to the Immigration Branch, Department of Mines and Resources, with regard to the physical and mental condition of applicants for immigration. In the majority of instances, prospective immigrants are examined by the Overseas Medical Service of the Department before embarking for Canada. They are subject to further medical inspection on arrival at the Canadian port of entry. If the immigrant has not been examined previously by the Canadian Immigration Medical Service overseas, a complete medical examination is carried out at the Canadian port of arrival. As a result of the advice of the department's medical officers, the Immigration Branch is, then, able to determine whether or not the individual concerned should be prohibited from entering Canada for medical reasons.

Immigration hospitals are maintained at the principal ports of entry, in order to provide observation, for diagnostic purposes, and treatment for immigrants on their arrival, if such is found necessary.

Doctors of the Service accompanied Immigration Examining teams dealing with Displaced Persons in Occupied Germany and Austria. The number of doctors so employed during the year varied from six to nine.

Overseas headquarters of the Immigration Medical Service is in London, England. During the war, the office was located in Sackville House. With the expansion of immigration following the War, this office accommodation was found to be entirely inadequate. It was difficult to obtain new offices, but finally a lease was taken for the premises at 42-46 Weymouth St. The necessary renovations were carried out and the staff moved to the new offices in the Fall of 1948.

Full-time Canadian medical officers are stationed in the United Kingdom at London, Glasgow and Liverpool, and on the Continent, at Paris, Brussels, The Hague and Rome. In addition, there are 587 approved roster doctors in the United Kingdom, and others at Oslo, Norway; Stockholm, Sweden; Copenhagen, Denmark; Warsaw, Poland; Prague, Czechoslovakia; Athens, Greece; Lisbon, Portugal; Belgrade, Yugoslavia; Berne, Switzerland; Malta; New Delhi, India; and Hong Kong and Shanghai, China. At the end of the fiscal year, there were 27 full-time medical officers in the Service overseas.

All immigrants are required to have an X-ray examination of the chest before entry is approved, except those from the United States of America, New Zealand and Australia. A total of 3,079 X-ray films were referred to Ottawa, and 64 of the individuals concerned were certified. There have been a large number of cases certified under Section 3, s.s. (b) and Section 3, s.s. (c) because of pulmonary tuberculosis. This is a result, in large measure, of routine X-ray of their chests.

In Canada, 105,733 immigrants were medically inspected on arrival at ocean ports. A total of 132,422 prospective emigrants were medically examined overseas. Medical re-examinations of 5,675 individuals were made before a final decision

was rendered as to their condition. In addition, 25,788 non-immigrants were given careful medical supervision on arrival. A total of 4,004 individuals were refused permanent admission to Canada as a result of these examinations. Two deportees were examined at the port of Montreal during the year.

A number of ex-service personnel, patients of the Department of Veterans Affairs, and Indian and Eskimo patients of the Indian Health Services of the Department of National Health and Welfare, were treated at the Immigration Detention Hospital in Quebec. All of the veteran patients and the majority of patients of the Indian Health Services were under treatment for tuberculosis, chiefly pulmonary.

The medical officers of this Service in Canada also assisted in Quarantine and Sick Mariners' work.

Summary of activities of the Immigration Medical Service, details of examinations, and details of certifications and disposition of cases, both at Canadian ports and Overseas, will be found in tables 27, 28 and 29, on pages 168 and 169.

### SICK MARINERS' SERVICE

Out of a total crew membership of 89,057 on vessels at Canadian ports, the Sick Mariners Service provided treatment this year for 20,565 sick mariners.

Part five of "An Act Respecting Shipping", which has existed, with various amendments, since 1867, provides medical and surgical treatment of all members of the crews of those vessels paying dues under its authority. Dues are levied and collected by the Collector of National Revenue on every ship arriving in any port of the provinces of Nova Scotia, Prince Edward Island, New Brunswick, Quebec and British Columbia, and at ports in Manitoba and Ontario, on Hudson Bay and James Bay, provided the ship does not come within one of several exemptions.

A high standard of general medical practice is provided at all ports in the provinces named, where there is a customs officer legally competent to administer the Act. Treatment is free for a period of one year, if needed. No expense is spared in providing the best specialist medical, surgical and hospital care, when required. Wherever possible, a choice of hospital is permitted.

Conditions under which treatment is obtained are kept as simple as possible. The sick seaman applies to the captain of the vessel, who sends him to the local Collector of Customs with a written statement setting forth his employment period on the vessel and giving details regarding payment of sick mariners' dues. Concise forms are provided for this purpose. The Collector verifies these facts and, if satisfied, refers the patient to the doctor or hospital previously nominated for this purpose. Emergency cases are taken direct by ambulance from ship to hospital.

During the year a number of Indian patients were hospitalized in the Marine Hospital at Sydney, N.S. These Indian patients are referred to the hospital by the Indian Agent and the Indian Health Service. The number of Indians in hospital during the year was 48; the number of patient days, 1,559; the average number of days per patient, 32.48.

Details of diseases and injuries treated; of vessels, dues and expenditures; of revenues and expenditure by provinces; and of treatment and hospitalization of sick mariners, will be found in Tables 30 to 33 inclusive, pages 170 to 171.

### LEPROSY

#### *Bentinck Island, B.C.*

During the year, no patients were discharged from the Dominion Government Hospital for Treatment of Leprosy at Bentinck Island, B.C. The one patient

remaining from last year, a Chinese male, is still under routine care and treatment. Maintenance of equipment has been carried on. Relative information follows:

Patients remaining from last year.....	1
Admitted during year.....	0
Died during the year.....	0
Released during the year.....	0
Remaining in hospital.....	1

#### *Tracadie, N.B.*

The leprosarium at Tracadie is a wing of the Hotel Dieu de St. Joseph Hospital, built by the Sisterhood known at the Sisters of the Hotel Dieu, of Tracadie, N.B. This Sisterhood received a grant from the Dominion Government to assist in the construction of this wing. This Division pays the Hotel Dieu de St. Joseph Hospital for the care of leper patients on a per diem basis. The quarters are very suitable for the purpose for which they were designed.

One of the eight patients in this hospital died during the year, leaving a total of seven. Four of these may be considered as under active treatment and showing signs, to a variable degree, of active leprosy. The other three are considered as arrested cases. Three of the patients are males and four are females. Two are of French Canadian origin, one of French and Scotch descent, two of Russian ancestry (one Canadian born), and two are Chinese.

Particulars are as follows:

Remaining from last year.....	8
Admitted during the year.....	0
Died during the year.....	1
Discharged during the year.....	0
Remaining in hospital.....	7

## VENEREAL DISEASE CONTROL



During the fiscal year 1948-49, the Venereal Disease Control Division, in its role of providing leadership in reducing the menace of venereal infections in Canada, has continued to stress the following measures directed to this end: planning effective control on a comprehensive basis, administration of federal grants, accumulation of statistical data, co-ordination and correlation of accepted procedures, provision of lay and professional educational services and the encouragement of research and improved training facilities.

During the first six months of the year the Chief of the Division was actively engaged in work in the Health Insurance Directorate relating to the development of the National Health Grants Programme. Subsequent to the initiation of this programme the Division undertook the administration of the Tuberculosis Control Grant in consultation with the Health Insurance Directorate.

The principal activities engaged in by the division included:—

- (a) continued administration and distribution of the Venereal Disease Control Grant of funds, materials and anti-venereal disease drugs to the provinces, according to regulations set forth by Order in Council;
- (b) administration of additional grant of funds under the National Health Plan for assisting the provinces in intensifying their efforts to combat venereal disease;
- (c) further development and distribution of venereal disease educational material, and other informational activities;

- (d) continuation of project involving review of venereal disease documents of all service personnel (Navy, Army and Air Force) and provision of information, upon request, to provincial venereal disease control divisions;
- (e) continued provision of anti-arsenical compound "BAL" for therapeutic and research purposes;
- (f) convening of the Fourth Federal-Provincial Conference of Venereal Disease Control Directors;
- (g) continued compilation and expansion of Quarterly Statistical Report on Venereal Disease in Canada;
- (h) increasing activity with respect to closer liaison with foreign countries and the World Health Organization.

In addition to the above general features, a number of minor activities and routine procedures were undertaken and, in the main, successfully completed. These included liaison visits to provincial venereal disease control divisions, revision of certain record forms in general use throughout Canada and the development of new forms for the purpose of unifying general procedure in venereal disease control. Other activities were carried out according to the established function of the division.

### FEDERAL GRANTS

During the fiscal year 1948-49 grants for venereal disease control were administered under Orders in Council P.C. 1690 and P.C. 3404 covering amounts of \$225,000.00 and \$275,000.00 respectively.

The allotment of \$225,000.00 provides funds under two main headings; a cash grant with a proportion held in reserve for the purchase of educational material and equipment, and a separate allotment for the purchase of drugs. As provided in the Order, a cash grant amounting to 85% of \$175,000.00 was disbursed in its entirety upon receipt and approval of individual provincial submissions. Its expenditure is later to be accounted for by the provinces. More than 90% of the 15% reserve for educational material and necessary equipment was expended. The drug account in the amount of \$50,000.00 was expended within a few dollars of the total sum.

The following is the distribution of the Federal Grant according to P.C. 1690:

Province	Total Grant	Materials and Educational Reserve (15%)	Net Cash Grant (85%)
Prince Edward Island.....	5,041.11	\$ 756.17	\$ 4,284.94
Nova Scotia.....	10,873.55	1,631.03	9,242.52
New Brunswick.....	9,434.90	1,415.24	8,019.66
Quebec.....	45,087.01	6,763.05	38,323.96
Ontario.....	50,366.23	7,554.93	42,811.30
Manitoba.....	12,223.24	1,833.49	10,389.75
Saskatchewan.....	13,319.95	1,997.99	11,321.96
Alberta.....	13,098.94	1,964.84	11,134.10
British Columbia.....	15,555.07	2,333.26	13,221.81
CANADA (exclusive of Yukon and Northwest Territories).....	175,000.00	26,250.00*	\$148,750.00

\*(An amount of \$3,069.00 was also expended in this account as a supplementary vote in a carry-over from 1947-48 commitments).

The annual provision of \$50,000.00 for recognized and approved medication for the treatment of venereal disease, distributed to the provinces on a basis of population was as follows:

	<i>Distribution of Grant</i>
Prince Edward Island.....	\$ 374.50
Nova Scotia.....	2,472.50
New Brunswick.....	1,955.00
Quebec.....	14,779.50
Ontario.....	16,678.50
Manitoba.....	2,958.00
Saskatchewan.....	3,352.50
Alberta.....	3,273.00
British Columbia.....	4,156.50
CANADA (exclusive of Yukon and Northwest Territories)	<hr/> \$50,000.00 <hr/>

Since July 1948, under Order in Council P.C. 3404, an additional sum of \$275,000.00 has been made available to the provinces to extend and further intensify their efforts to control V.D. This grant was administered on a project basis in much the same manner as other grants under the National Health Programme.

These projects covered a wide variety of items and in most instances were correlated with existing procedures financed by provincial funds and further supported by the pre-existing Federal Grant, the principal objective being to round out the respective provincial control programmes. Greatest stress was laid upon the treatment aspect employing penicillin. A total of approximately \$142,000.00 was approved for the further extension of free treatment for such items as the payment of fees to physicians for diagnostic and treatment services, the support of free clinics and the free provision of penicillin which in itself represented an estimated expenditure of \$95,000.00 out of this amount. The provision of personnel and special equipment for certain of these clinics is not included in the above total.

Other projects provided for administrative staff and full-time and part-time physicians in the V.D. diagnostic and treatment clinics. Provision was also made for the extension and improvement of laboratory services. It is interesting to note in one province a mobile V.D. clinic has been set up to cover more sparsely populated areas which lack adequate local medical care and are not sufficiently populated to justify a permanent clinic.

Under this Grant thirty-three projects were approved through the fiscal year, representing a commitment of \$211,910.29 or 77% of the total amount.

*Individual Provincial Allotments (P.C. 3404)*

Prince Edward Island.....	\$ 2,058.00
Nova Scotia.....	13,599.00
New Brunswick.....	10,752.00
Quebec.....	81,287.00
Ontario.....	91,732.00
Manitoba.....	16,271.00
Saskatchewan.....	18,438.00
Alberta.....	18,001.00
British Columbia.....	22,862.00
	<hr/> \$275,000.00 <hr/>

Thus, under the two Orders a total of \$500,000.00 was made available for venereal disease control, and the respective amounts provided with the total allotments are as follows:

*Summary of Provincial Allotments for Venereal Disease Control*

	1948-49					
	P.C. 1690				P.C. 3404	
	Cash Grant	Material Allotment	Drug Allotment	Total Allotment	Allotment	Total Allotment
P.E.I.	4,284.94	756.17	374.50	5,415.61	2,058.00	7,473.61
N.S.	9,242.52	1,631.03	2,472.50	13,346.05	13,599.00	26,945.05
N.B.	8,019.66	1,415.24	1,955.00	11,389.90	10,752.00	22,141.90
Que.	38,323.96	6,763.05	14,779.50	59,866.51	81,287.00	141,153.51
Ont.	42,811.30	7,554.93	16,678.50	67,044.73	91,732.00	158,776.73
Man.	10,389.75	1,833.49	2,958.00	15,181.24	16,271.00	31,452.24
Sask.	11,321.96	1,997.99	3,352.50	16,672.45	18,438.00	35,110.45
Alta.	11,134.10	1,964.84	3,273.00	16,371.94	18,001.00	34,372.94
B.C.	13,221.81	2,333.26	4,156.50	19,711.57	22,862.00	42,573.57
	\$148,750.00	\$26,250.00	\$50,000.00	\$225,000.00	\$275,000.00	\$500,000.00

### EDUCATION

The development and distribution of venereal disease educational material was carried on throughout the year with special emphasis being placed upon certain projects as follows:

- Completion and distribution of the booklet "Venereal Disease—What You Should Know", 52 pages with 30 full-page illustrations. This is designed to meet the need for a complete discussion of the venereal diseases in a form that can be readily understood by the layman. Since the illustrations are the same as those of the V.D. Platform Presentation Charts (developed and distributed in 1947-48), the book is admirably suited as a lecturer's guide.
- Development and distribution of six colorfully-designed desk blotters, 4" x 9". Each blotter design deals with some aspect of the V.D. problem and the series is for generalized distribution.
- A special supplement to the department's monthly publication "Canada's Health and Welfare" was produced dealing with the V.D. question. Reprints were distributed to provincial V.D. control authorities.
- Nineteen display stands for exhibiting various forms of venereal disease educational material were purchased and provided for the provinces.
- Prints of the educational film "Human Growth" dealing with the physiology of sex were purchased and distributed to the provinces.
- A two-reel film to deal with the problem of venereal disease for general use has been recommended by the Conference of Provincial Directors of Venereal Disease Control. This project is presently under study.

In addition, the professional staff was active in the educational field. The Chief of the Division, as Chairman of the Section of Venereal Disease Control of the Canadian Public Health Association, presided over the Annual Sectional Meeting on May 18, 1948. Several technical papers on venereal disease control were presented. The Chief of the Division was re-elected chairman for the following year.

The Medical Consultant attended the Symposium on "Recent Advances in the Management of Syphilis" held in Washington, D.C., April, 1948; the meeting of the Canadian Medical Association in Toronto in June; the joint meeting of the Western New York-Ontario Urological Society and the Central Section of the American Urological Association in Montebello during October; and the Seminar on Venereal Disease at the U.S. Public Health Services' Venereal Disease Hospital, Hot Springs, Arkansas, U.S.A. in November. All information gathered at these meetings has been transmitted to the Provincial V.D. Control Officers for their further utilization. All provinces were visited during the year, and during these visits efforts were made to bring to the attention of Provincial V.D. Control Directors and their staffs all useful knowledge with respect to the management of venereal disease.

The Educational Representative of the Division visited several American V.D. educational institutions early in the fiscal year with a view to acquiring information regarding the most modern methods and techniques employed by the U.S. Public Health Service and the American Social Hygiene Association in this field.

### SERVICE PERSONNEL RECORDS

As indicated in the annual report of the Department for 1948, review of Service personnel venereal disease records has been continued. Procedure involved necessitates the examination and condensation of all available data, placed upon a permanent record card and, by comparison with earlier correspondence with Provincial Health Departments, the adequacy of information previously provided is determined. This is supplemented as deemed advisable.

During the current fiscal year all syphilis documentation and positive serology documentation has been practically completed insofar as Army is concerned. At present, questionable and doubtful cases are being cleared up. This part of the review will be completed by the end of the fiscal year. A nominal roll has been prepared from Air Force documentation and the preparation of permanent records will be proceeded with immediately. A Navy nominal roll has been prepared but no action has been taken as yet since information thus far available is rather incomplete.

### BAL RESEARCH PROJECT

Toward the end of the previous fiscal year it was found that the originally prepared supply of BAL had been distributed almost in its entirety. Steps were therefore instituted to process an additional quantity of approximately 3,000 ampoules of the 10% solution for extension of the research project on this compound and the continuation of its therapeutic employment, particularly since the material was still not available at that time through commercial sources in Canada.

During the current fiscal year this additional supply of BAL has been distributed with the exception of a very small stock held in reserve, together with approximately 2,000 revised instruction booklets. Since the solution is now commercially available, with the concurrence of Provincial V.D. Control Directors, the Division will not undertake further provision of BAL when the present stock has been exhausted.

### QUARTERLY STATISTICAL REPORT

The compilation of a statistical report from reported incidence figures on venereal disease provided by Provincial Health Departments to the Dominion Bureau of Statistics and initiated three years ago has been continued. This report is distributed to the Provincial Health Departments at quarterly intervals as well as to other interested agencies, and represents the most complete compilation of such figures available.

Appropriate tables extracted from the report are presented in Tables 34 to 37 inclusive on pages 172 to 175.

In considering these statistics it should be borne in mind that there are strong reasons to suspect the reporting of venereal disease, particularly gonorrhoea, to be inadequate. Consequently, the figures as they are presented should be assessed on a basis of their comparison with related figures to evaluate trends, rather than as representing the true picture of one or several aspects of the venereal disease problem in Canada.

### CONFERENCE OF DIRECTORS

The Fourth Federal-Provincial Conference of V.D. Control Directors was assembled in Ottawa on February 7-8, 1949. The greater part of the discussion dealt with the most effective utilization of the augmented Federal Grant and the consideration of features regarded as desirable for incorporation among the regulations governing the Grant.

As a result of the deliberations of this group of technical officers certain recommendations were made to the Dominion Council of Health and were endorsed by that body. The Conference also considered such items as:

- (a) Progress of V.D. surveys and planning of future control measures in the individual provinces;
- (b) Review of projects approved during the current fiscal year under the augmented V.D. Control Grant;
- (c) Improved procedures with respect to the notification of venereal diseases;
- (d) Future requirements of the anti-arsenical compound BAL;
- (e) Policy regarding V.D. education through motion pictures and radio;
- (f) United States Immigration Requirements; and other items of special interest to those administering venereal disease control programs.

### LIAISON

From time to time the Division has been in communication with the Venereal Disease Control Official of the World Health Organization, providing information concerning control measures throughout Canada and appropriate recommendations for consideration with respect to the international aspects of venereal disease control. Copies of reports on the sessions of the Expert Committee on Venereal Disease Control of W.H.O., and papers given by leading experts in this field, at these sessions, were distributed to the Provincial Directors.

The Directory of Venereal Disease Clinics for all Canadian provinces was revised during June and has been made available to the Provincial Venereal Disease Control authorities.

### RECORDS

As a result of a Resolution brought forward at the Third Federal-Provincial Conference of V.D. Control Directors and endorsed by the Dominion Council of Health, a revision of the national notification form was introduced and the new forms were made available to the provinces as of January, 1949.

The Division has also undertaken the preparation and distribution of a statistical card for use in the provinces for the purpose of unifying general procedure in gathering venereal disease statistics.

Also prepared and distributed was the "Personal Record of Treatment Booklet" in order that transient patients might have a copy of their syphilis therapy records including results of various tests performed.

### TUBERCULOSIS CONTROL GRANT

The Tuberculosis Control Grant was originally announced as part of the National Health Programme, funds in the amount of \$3,000,000 being made available by Parliament to help fight tuberculosis. The purpose of this Grant is to assist the

Provinces in an accelerated and intensified effort toward the eradication of tuberculosis and to extend progressively the provision of free treatment for this disease.

During the fiscal year 1948-49 the Tuberculosis Control Grant was administered by the Chief of the Division of Venereal Disease Control in consultation with the Director of Health Insurance Studies.

The Grant was distributed to the Provinces on the basis of a flat amount of \$25,000.00 to each Province and the balance divided, 50% on the basis of population and 50% on the average number of deaths from tuberculosis in each province over the five-year period, 1942-46 inclusive.

Allocations of the Grant to the Provinces were as follows:

Prince Edward Island .....	\$ 46,774.00
Nova Scotia .....	182,585.00
New Brunswick .....	142,598.00
Quebec .....	1,069,564.00
Ontario .....	740,751.00
Manitoba .....	187,998.00
Saskatchewan .....	173,787.00
Alberta .....	183,203.00
British Columbia .....	272,740.00
<u>Total .....</u>	<u>\$3,000,000.00</u>

During the first year of operation, 136 projects were given approval under the Tuberculosis Control Grant, representing the allocation of \$2,843,791.93 or 95% of the total grant.

The following table indicates the number of approved projects for each province, the total amount of the grant committed for expenditure in each province, the percentage of each province's share as committed and the amount of the grant actually expended for tuberculosis control.

Province	Number of App. Projects	Amt. of Grant Committed	% of Grant Committed	Amt. of Grant Expended
P.E.I.	11	\$ 46,770.18	100	\$ 34,015.70
N.S.	10	182,585.00	100	163,116.60
N.B.	15	142,598.00	100	130,985.45
P.Q.	19	1,068,236.83	99	1,068,236.83
Ont.	14	740,236.00	99	711,423.88
Man.	19	83,140.00	44	72,162.42
Sask.	13	173,787.00	100	170,923.49
Alta.	12	152,012.89	83	24,648.03
B.C.	23	254,426.03	93	210,091.20
<u>Total</u>	<u>136</u>	<u>\$2,843,791.93</u>	<u>95</u>	<u>\$2,585,603.60</u>

### Activities

Outstanding among the various items approved were specific projects aimed at the detection and treatment of tuberculosis, as follows:

- (a) Detection services centered chiefly around hospital admission routine chest X-ray procedures and the extension of mass survey activities; in five provinces an amount totalling approximately \$700,000.00 was made available;

- (b) In five of the provinces, approval was granted for the purchase of a total of nine mobile units of various types, representing an approximate outlay of \$210,000.00;
- (c) In the field of institutional care and treatment of tuberculosis, emphasis was placed upon the purchase and free provision of streptomycin. In all nine provinces projects were submitted and the total approved expenditure for this item was \$260,000.00;
- (d) An amount approaching \$1,000,000.00 was approved for the purchase of various items of technical and scientific equipment for active treatment, both medical and surgical, for general sanatorial care and for post-sanatorium management of tuberculous patients. This amount was over and above the X-ray equipment referred to in paragraph (a) and was in addition to materials provided for educational and related programmes.
- (e) Considerable stress has been placed upon the provision of administrative and technical staff by adding physicians, X-ray and laboratory technicians and other specially trained personnel. It should also be noted that in four provinces specific projects aimed at the improvement and extension of laboratory services have been approved;
- (f) On the preventive side, the use of B.C.G. vaccine has been adopted in one province for the immunization of children, and in another for individuals who are more likely to be exposed to tuberculosis;
- (g) Rehabilitation of tuberculous patients is assuming progressively increasing importance in the field of tuberculosis management as demonstrated by approval of projects dealing with this feature in six provinces.
- (h) Extension of educational activities dealing with various aspects of tuberculosis had resulted in the approval of projects from six provinces. In three provinces clinical research studies numbering seven have been given approval. These latter aim specifically at the improvement of diagnostic and treatment procedures in patients suffering with this disease.

#### *Plans for 1949-50*

At the end of the first fiscal year during which the Tuberculosis Control Grant has been available, the various projects submitted have revealed the general trend of the over-all programme directed against this disease and have indicated the various avenues into which intensive effort should be extended.

While specific planning of the multiple projects directed at the control of tuberculosis and for the support of which the Dominion Grant funds will be expended is a function of the provincial planning groups, it is apparent in the administration of the Grant, that many useful and constructive projects initiated during 1948-49 will be continued into the future. In many instances these will progress in expanding fashion and with the development of new measures, all will be combined to intensify and accelerate the campaign against tuberculosis.

By way of positive steps to be implemented, it is anticipated that specific prevention through the use of B.C.G. vaccine will have a definite place especially in those areas in which the prevalence of tuberculosis is high. X-ray detection procedures are showing ever increasing value through the medium of hospital admission examinations, the activities of mobile units, mass survey projects and established clinical examinations. One of the foremost aims is that routine hospital admission chest X-ray examinations will become a part of all provincial tuberculosis control programmes.

In the field of treatment, the grant funds have permitted the acquisition of additional, much needed equipment for the various surgical procedures which are finding an established place in tuberculosis management. Combined with streptomycin therapy in selected cases, and the other measures involved in the care of tuberculosis patients, one may anticipate definite advances in this aspect of tuberculosis control.



## HEALTH INSURANCE STUDIES

Representing the first stage in the development of a comprehensive health insurance plan for all Canada, a programme of Grants, totalling initially more than \$30,000,000 annually, was launched by the federal government in May, 1948, to help the provinces to extend their health promotion and conservation facilities.

Administration of the Grants was placed under the Directorate of Health Insurance Studies, with the assistance of departmental specialists in various fields to which aid was being extended.

Prime objectives of the National Health Programme were: (a) surveys—each province being assisted financially to study its health services and its hospital needs and to plan new health activities; (b) expansion of health services—grants encouraging new projects, widening the range of health facilities and stimulating public health research, the training of professional health workers, helping crippled children, fighting tuberculosis, cancer, venereal disease and mental illness, and (c) increases in hospital accommodation—assisting construction, to provide 40,000 badly-needed beds and to expand hospital services all over Canada.

A few months after the new programme was announced, the American Public Health Association, in convention at Boston, Mass., formally congratulated Canada on action which it declared made the year “memorable in the history of public health on this continent.”

### FEDERAL GRANTS

Providing for federal contributions totalling \$30,120,300 in the fiscal year 1948-49, the Health Grants were for the following:

*Health Surveys*—\$625,000—basic to the whole plan—to enable the provinces to employ these funds to best advantage—each province receiving \$5,000, plus its share of the remainder, on a population basis—no province receiving less than \$15,000;

*Hospital Construction*—\$13,000,000 annually—contingent upon the province concerned at least matching the federal contribution—subject to an overall ceiling, based on population—the money being divided among specific building projects on the basis of \$1,000 for each active treatment bed or bed equivalent and \$1,500 for each chronic or convalescent bed—these grants applying to hospitals and nursing units, or to additions to existing buildings commenced on or after April 1, 1948;

*Mental Health*—\$4,000,000—divided on the basis of \$25,000 flat grant to each province, the balance according to population—to stimulate mental health activity, including the training of professional personnel and the staffing of new hospitals and clinics: (The Mental Health Grants rise, over a period of years, to a total of \$7,000,000 annually);

*Cancer Control*—\$3,500,000—available for approved programmes of cancer control, provided the province matches the federal contribution—to speed up the fight against cancer;

*Tuberculosis Control*—\$3,000,000 the first year, rising, over a period of years, to \$4,000,000—divided on the basis of \$25,000 flat grant to each province, the balance divided 50 per cent on the basis of population and 50 per cent according to the average number of deaths from tuberculosis in each province in the years 1942 to 1946 inclusive; (These grants are expected to enable the provinces to extend areas of free treatment and to accelerate the drive to wipe out tuberculosis);

*Crippled Children*—\$500,000—divided on the basis of \$4,000 flat grants to each province, the remainder according to population—to further the work of combatting crippling diseases of childhood;

*Professional Training*—\$500,000—a flat \$4,000 to each province, plus a share according to population—for professional training;

*General Public Health*—\$4,395,300—on the basis of 35 cents per capita of population—to strengthen public health services generally, to assist in controlling communicable disease and to help such programmes as those initiated in the field of child and maternal health; (These grants will rise to a maximum of 50 cents per capita annually);

*Venereal Disease Control*—\$500,000—more than doubling the former federal contribution to the Dominion-Provincial campaigns against venereal disease;

*Public Health Research*—commencing at \$100,000 annually and increasing over a period of five years to \$500,000 annually—for projects submitted through, and approved by, the Dominion Council of Health.

## ADMINISTRATION

Considerable expansion of the Health Insurance Studies Directorate occurred following announcement of the National Health Programme. Its activities have been connected mainly with administration of the grant programme, although fundamental studies on health insurance and related matters have not been neglected.

Prior to the establishment of the directorate, studies and investigations had been carried out in the field of health insurance by the Director of Public Health Services of the former Department of Pensions and National Health. The new service was to continue these studies.

On appointment of a permanent director during the past year, the machinery was set up, after consultation with the Dominion Council of Health, for the administration of the ten new federal grants. Activities have been so organized that the

Director exercises over-all control of the National Health Programme and carries out fundamental administrative functions, while detailed examination of projects submitted by the provinces is carried on with the assistance of appropriate health divisions.

Matters relating to the Crippled Children's Grant are thus considered by the Child and Maternal Health Division, Hospital Construction projects by the Hospital Design Division, Venereal Disease proposals by the Venereal Disease Control Division, Mental Health Grant matters by the Mental Health Division, proposed Tuberculosis control measures by the Chief of the Venereal Disease Control Division, and Public Health Research and General Public Health projects by the Director of Health Services. The Professional Training Grant, Survey Grant and Cancer Control Grant are administered entirely by the office of the Director of Health Insurance Studies.

Wholehearted co-operation has been rendered by all the provinces in the implementation of the health programme. The Dominion Council of Health, which is the statutory body for clearing all health matters within the Dominion-Provincial sphere, was actively engaged during the fiscal year in advising the department on matters of policy and administration, and all the department's own services cooperated to the full.

To facilitate the co-operation of professional bodies concerned with the operation of the health grants, a National Consultative Committee was created to include representatives of the Canadian Medical Association, l'Association des Medecins de Langue Francaise du Canada, the Canadian Public Health Association, the Canadian Dental Association and the Canadian Nurses' Association. This committee, at its first meeting, proved to be very helpful and enthusiastic in giving assistance to the department.

Appointment of two Assistant Directors and expansion of administrative staff in the directorate will strengthen the administration of the Health Programme. Thought is being given to necessary changes in procedure to increase its effectiveness and incoming provincial reports on utilization of the grants, as well as the interim survey reports, are building up a picture of the health situation across Canada. Analysis of this material will be one of the major objectives of the directorate.

It is intended to devote more time and effort to studies on basic approaches to health insurance, in its administrative and financial aspects. A report is being made on the working of the National Health Service scheme in Great Britain by a senior official of the department who visited Britain to obtain information concerning that plan. Entry of Newfoundland into Confederation will increase the work of the directorate.

Descriptions follow of grants under the National Health Programme and the extent to which they are being utilized by the provinces.

## HEALTH SURVEY GRANT

A sum of \$625,000 was provided for the initial period of the National Health Programme to assist the provinces in surveying their existing health services and facilities, including hospitals, and in studying ways and means of improving and extending them. The money was to be distributed on the basis of a flat amount of \$5,000 to each province and the balance according to population, the total payment to any province in no case to be less than \$15,000.

As announced by the then Prime Minister when the Health Programme was first introduced in Parliament, this was to "assist the provinces in setting up the machinery which would be necessary to ensure the most effective use of the other health grants . . . and in planning the extension of hospital accommodation and the proper organization of hospital and medical care insurance."

Subject only to a certain amount of necessary over-all control, the provinces were left free to proceed with survey activities. Some of the provinces had surveyed certain fields of their activities prior to announcement of the programme; some had very rudimentary apparatus for carrying on a survey. In general, however, the provinces had to make a start by establishing and designating their survey agencies. Without any over-all control in this respect, a general pattern did evolve and all the provinces established a working team supported by a body which includes representatives from the health professions and other interested groups.

There is no hard-and-fast order of priorities in surveying the health field, and the provinces have tackled first the problems which they considered to be most urgent. In view of the magnitude of the task and the thoroughness with which it must be carried out, no general statement can be made concerning the findings, but complete reports and provincial plans were beginning to take shape rapidly at the end of the fiscal year.

## HOSPITAL CONSTRUCTION GRANT

A survey of existing hospital facilities was one of the requirements in determining a comprehensive hospital system for each province and was to be one of the major features of the over-all health survey. This was a slow and tedious task requiring infinite detail.

The needs for additional hospital accommodation, however, were too pressing to postpone the actual construction until such surveys were completed by the provinces. It was understood, moreover, that each province had, if not a detailed plan, at least a general one for a hospital service and a well scrutinized outline of its hospital needs which permitted it to ascertain whether a new construction project was, or would be, a component of its over-all scheme. A statement by the province to this effect was one of the basic conditions governing the administration of the Grant. Once this condition, together with a number of financial and technical undertakings, was fulfilled, the actual project became eligible for Federal aid under this grant.

In order that monies available in the Hospital Construction Grant would be put to the best use in the interests of efficient hospital planning, there were prepared general standards of hospital construction for guidance. There were included minimum requirements as well as a number of matters which were regarded as desirable in raising hospital construction standards in Canada.

Hospital projects under construction prior to the standards being available were not bound too strictly by them, but any variance from the standards was brought to the attention of the Provincial authorities.

Each hospital construction project was carefully examined by the Chief of the Hospital Design Division on the basis of submitted construction plans. In some cases redesigning was suggested and it should be emphasized that, in almost all such instances, the suggestions were accepted and were highly appreciated by the Provincial hospital authorities and architects concerned.

For the seven months' period during which the plan was operative, 107 construction projects, designed to supply 9,241 new hospital beds, were approved. Grants amounting to \$7,673,366 were allocated to assist in this expansion of hospital facilities.

All the provinces participated to varying degrees in this programme. Grants approved to the various provinces ranged from a minimum of \$17,309.90 to a maximum of \$3,842,650.

## GENERAL PUBLIC HEALTH GRANT

This grant had for its purpose strengthening of public health services generally in those areas where the Provincial authorities felt such was most necessary. It is important to note that though the provinces had not had time to complete their health surveys as their *final* guide in the utilization of this grant, yet the provincial expenditures were primarily allotted to the bolstering up of the *basic* health services throughout urban and rural Canada.

An analysis of the projects submitted allows them to be grouped under the following headings:

1. development of new Health Units and extension of services in existing units;
2. provision of nurse training facilities and extension of nursing services;
3. extension of laboratory services, including space and equipment, provision of biological products and immunization materials;
4. environmental sanitation—a wide variety of projects mainly under sanitary inspection services, employment of technical personnel, development of public health engineering services, etc;
5. dental care—including establishment of dental health divisions, dental hygiene clinics;
6. health education—employment of health educators, provision of visual aid equipment, publications, etc.;
7. child health—school medical services, well baby clinics, prematurity services, etc.;
8. general services—including projects for:
  - (a) the provision of added medical services in unit areas;
  - (b) detection of diabetes;
  - (c) studies of poliomyelitis;
  - (d) grants to the Canadian Arthritis and Rheumatism Society (each province contributed one per cent of their General Public Health Grant);
  - (e) studies of the Rh factor in blood grouping;
  - (f) provision of statistical services in provincial and local health units.

Certain projects were of special interest, such as programmes to increase facilities in industrial health, to provide nutritional advice and consultation to hospitals and to increase the number of trained nutritional personnel. A small amount of money was devoted to the expansion of health library facilities in local health units, especially in isolated areas.

Several provinces used the grants to protect their children and adults by providing free vaccines and anti-sera, including, in some cases, BCG against tuberculosis.

Seven of the nine provinces used the grant to increase and broaden local or provincial programmes for laboratory diagnosis, and in one case the provision of a mobile hygiene laboratory.

The General Public Health Grant was used in certain urgent cases to amplify the Professional Training Grant where the provinces had already expended the latter funds,—resulting in the provision of more trained public health medical, nursing and technical personnel.

During the seven months ending March 31, 1948, the provinces applied for a total of \$1,286,461.91 under this Grant.

Amounts requisitioned by the provinces varied from 8.6 per cent to 98.4 per cent of their individual allotments. Maximum and minimum amounts approved per province were \$359,863.95 and \$24,981 respectively.

## MENTAL HEALTH GRANT

The main uses to which the provinces have put Mental Health Grant funds are: (1) additional staff in mental hospital, mental health clinics, and psychiatric wards in general hospitals, (2) equipment for these three types of services, and (3) training more personnel—psychiatrists, psychologists, nurses, psychiatric social workers—to staff new services.

The extent and social implications of mental illness have begun to be appreciated only in very recent years. As a result, the field of mental health work is greatly understaffed. The most important steps being taken at present are the expansion of training facilities and increasing the number of persons under training to staff the new mental health services which can only be created when the personnel is available. As an example of the use of the Mental Health Grant in the training field, the Ontario project for the University of Toronto may be cited. It provides for additional teachers in the Departments of Psychiatry and Psychology and in the School of Social Work. It provides certain equipment to assist in the teaching programme. It provides also for bursaries for graduate students in Psychiatry, Psychology, Psychiatric Nursing, and Psychiatric Social Work. The Department of Psychiatry has made excellent progress in expanding its training through the use of grant funds. The Department of Psychology has been handicapped through the unavailability of premises. The School of Social Work has made considerable use of the available funds. Due to the fact that this project was not submitted to the Department until September 1948, the university was unable to make as full use of the grant as will undoubtedly be the case next year through being able to plan sufficiently in advance.

As an example of the use of the grant to improve the equipment for scientific investigation and treatment of mentally ill patients in hospital, the projects submitted by British Columbia for the Crease Clinic of Psychological Medicine may be cited. The Crease Clinic of Psychological Medicine of over 300 beds has recently been completed at Essondale, B.C. This is a very fine building which will be used for the treatment of mentally ill persons requiring up to four months treatment. In this group there are 50 per cent of those ordinarily admitted to mental hospital. British Columbia has used the Mental Health Grant to equip this hospital with the most up to date scientific equipment for laboratories, X-Ray investigation, and other services. The Crease Clinic will, within a few months, be a definitely outstanding hospital among hospitals of all types in Canada and the United States.

As an example of the use of Mental Health Grant funds in providing preventive services, the establishment of a full-time child guidance clinic to serve Edmonton and the northern part of Alberta may be mentioned. The annual cost of maintaining the clinic will be approximately \$25,000. This project will provide facilities for the examination and treatment of persons suffering from nervous and mental illness with special emphasis on children. It is accepted by authorities that there should be one such fully staffed clinic to every 100,000 of general population. There had been only one such clinic in Alberta previously. On the basis of one clinic for every 100,000 people, Canada should have 130 clinics. Before the health grant programme came into effect there were only 14 full-time and four part-time clinics of this nature. In the past year the Federal Government has approved projects submitted by the nine provinces for equipment and staff for 15 more.

An outstanding example of cooperation among the three Maritime Provinces was to be found in their contributing to the support of post-graduate training in Psychiatry, Psychology, and Psychiatric Social Work at Dalhousie University. These

three provinces are allocating out of their respective portions of the Mental Health Grant an amount based on provincial population. This training centre will go a long way towards providing competent staff for the mental health services both in hospital and in the community in the Maritime Provinces.

Funds made available for amelioration of problems of mental health ranged from a minimum of \$8,490 to a maximum of \$352,657.

The money requisitioned by the provinces represented 28.5 per cent of the Mental Health Grant available for 1948-49.

## CRIPPLED CHILDREN GRANT

The annual grant for the care of crippled children is \$500,000. Under the terms of the Order-in-Council, \$4,000 is given to each province as a basic grant and the remainder on a population basis. The basic amount was decided upon in order to have sufficient funds to develop worthwhile services.

The amount of \$500,000 annually is, of course, not sufficient to take care of the whole problem of crippled children; therefore, in order to make the best use of the money, it is necessary that a definition of what constitutes a crippled child be agreed upon by the provinces. One such definition might be:—

“A crippled child is a person under 21 years of age who, because of disease, accident or defect, is restricted in his normal muscular movements”, (Blindness, deafness, rheumatic heart disease and mental defectiveness being excluded).

### *Ontario*

One outstanding project submitted by the Province of Ontario was the development of a centre exclusively for the care of cerebral palsy cases. This is at Woodedden Camp near London. Cerebral palsy presents aspects of great importance—it is one of the most common of the crippling conditions, and it requires expert care. However, rehabilitation is favourable in the majority of cases.

Ontario has provided a province-wide project—the establishment of a District Orthopaedic Nursing Service. The province will be divided into 13 districts, each having a public health nurse with orthopaedic training. The nurses will serve as liaison officers between hospitals where treatment is given, the local health authorities and the home. They will also make surveys to discover crippled children who might benefit by treatment or by additional care. These services had already been initiated by the Ontario Society for Crippled Children, and the grant is being used to strengthen and perfect them.

Another project was the Northern Ontario Diagnostic and Treatment Clinic. It is planned to send this clinic to centres to examine children following surveys made. The clinic is to consist of at least one orthopaedic surgeon, a neurologist, a nurse, and a stenographer. A service of this nature had been carried out irregularly from time to time under the Ontario Society for Crippled Children.

### *Saskatchewan*

Saskatchewan submitted an important project whereby facilities for the care of all crippled children would be provided. This project is intended to reinforce the services which have functioned for some years under the Junior Red Cross. Equipment for correction and rehabilitation is being provided in the new Junior Red Cross Hospital. This will make the centre capable of taking care of all conditions coming under the definition.

*British Columbia*

This province submitted seven projects intended to provide the necessary orthopaedic equipment for various institutions throughout the province in order to make treatment of crippled children accessible to all the population. These projects include orthopaedic equipment for small general hospitals, the Royal Jubilee Hospital, St. Paul's Hospital, and the Queen Alexandra Solarium for Crippled Children. Also, for the Health Centre for Children, Vancouver, some staff, orthopaedic appliances, and equipment for the treatment of eyes are to be provided.

*Alberta*

The Province of Alberta made use of the grant to extend facilities for the care of crippled children suffering from infirmities from poliomyelitis which occurred prior to 1938, as no provision was made under the Alberta Poliomyelitis Sufferers' Act of 1938 to care for this group.

*New Brunswick*

Under this grant the Province of New Brunswick is providing hospital care, surgeons' and anaesthetists' fees, and corrective and therapeutic appliances. This is for all children suffering from crippling from causes other than poliomyelitis as the province for some years has provided free treatment for polio cases. The Junior Red Cross was delegated by the Province to arrange for the administration of treatment. They have a long list of children requiring care.

*Prince Edward Island*

This province submitted a project to provide assistance to the provincial division of the Canadian Red Cross Society in their crippled children programme. The intention is to help the Red Cross to increase the number of crippled children who receive treatment from the agency pending the development of a Crippled Children programme by the Provincial Department of Health and Welfare.

*Quebec*

Quebec began using some of the grant for the purchase of scientific equipment and apparatus for treatment of crippled children at the Sacred Heart Hospital at Cartierville.

*General*

Projects submitted by the provinces were reviewed and grants totalling \$144,955.34 were made to assist in development of programmes of prevention, correction and rehabilitation for crippled children.

Eight provinces took advantage of the opportunity to expand their facilities and sums ranging from \$2,000 to \$32,633.15 were allotted. Altogether 28.9 per cent of the 1948-49 money provided was made available to the provinces under this grant.

## PROFESSIONAL TRAINING GRANT

The Professional Training Grant provided \$500,000 for the purpose of training personnel for public health and hospital staffs.

Originally, in the 1945-46 proposals to the Provinces, the sum suggested for this grant was \$250,000. Because of the increasing shortage of trained personnel in the health field, and particularly those required to staff hospitals, the grant was increased under the National Health Programme to \$500,000, in order to provide extra funds specifically for the training of personnel for hospital staffs.

The purpose of the Grant is to make it possible for the provinces to recruit and train more public health personnel and more people to staff hospitals. This was to be accomplished by the provision of bursaries to provide academic instruction, by the establishment of short courses for various types of personnel and by making available special instruction in the various health fields.

As the Grants Programme did not go into operation until August 1948, it was logical and necessary that the Grant for Professional Training would be the first of the grants to be applied, in order that the trainees who required academic instruction could start in the various universities of Canada at the beginning of the academic year, late in September. Every province in Canada was able, even in the short time available, to recruit some personnel for regular academic instruction, the central provinces having greater success, by and large, in this connection, than either the Maritimes or the western provinces.

In reference, particularly, to academic instruction, it was necessary, right at the beginning of the operation of the Grant, to draw up a schedule of payments that would be available to trainees, and, as well, to devise a form of agreement to be completed between the province and the trainee. A provisional schedule was compiled after consultation with the provinces by mail, and taking into consideration fellowships being provided by foundations and other organizations. The schedule was subsequently reconsidered at the March meeting of the Dominion Council of Health, and, with some alterations, was recommended to the Minister for his approval.

Academic training for work in the public health and hospital fields includes nearly all the professions. The various types trained this year are as follows:

Medical—for work in Provincial Health Departments, directors of Health Units, specialists in tuberculosis, pathologists and radiologists, hospital administrators, etc.;

Dentists—for work in Provincial Health Departments, for school dental clinics, etc.;

Veterinarians—for food control, for milk supervision, etc.;

Engineers (Public Health)—for work in Provincial Health Departments, in charge of sanitation;

Nurses—public health, nurse instructresses for general and other hospitals, nurse supervisors for general and other hospitals, obstetrics, orthopaedic, laboratory work, operating room technique, etc.;

University Graduates—M.Sc., B.Sc.—bacteriologist, entomologist.

Nearly every province put on special training courses to take care of their special needs. In three provinces special short courses were established and put into operation for hospital accountants. One province put on a short course for administrators of small hospitals. In two provinces special courses have been established, which will be operating for an indefinite period of time, to train laboratory as well as X-ray technicians. In one province a special project was approved for the training of nursing aides to staff general and chronic disease hospitals. Special training has been given to hospital inspectors, hospital dietitians, and senior sanitary inspectors. In one province a special course covering a year's period for the training of sanitary inspectors was established.

In evaluating the projects submitted during the past fiscal year under the Professional Training Grant, it is apparent that a pretty general pattern was developing. The first and most important use to which the Grant could develop in the next year might be in the academic training of persons for what might be called the senior positions in both the public health and hospital fields, namely, medical men in general public health work, special public health fields, and hospital administration, dentists, veterinarians, engineers, public health nurses, nurse instructresses, nurse supervisors, lay hospital administrators, and probably a number of a new group which were not covered this year, namely, public health educators.

With the longer period of time to recruit personnel for training, it seems certain that this grant will be much better utilized for academic training during the coming year than in the seven months of the past fiscal year. There is no doubt, also, that any amount that may be left over after the academic requirements are taken care of can be exceedingly well used for short term courses for individuals or refresher courses for groups of personnel in the various fields.

Grants actually approved up to March 31, 1949, amounted to \$305,758.49. Of this total, \$162,500 was allocated for professional training in the two central provinces.

Although Ontario and Quebec were able to organize more extensive training projects, in the time available, all the provinces participated under this Grant to some extent.

Sums allocated varied from a minimum of \$7,473 to a maximum of \$92,500, representing 61.2 per cent of the Professional Training Grants for 1948-49.

## PUBLIC HEALTH RESEARCH GRANT

This Grant in the amount of \$100,000 for the fiscal year 1948-49 and increasing each year by \$100,000 until it reaches the sum of \$500,000, is intended to assist the provinces in stimulating and developing public health research. To make the Grant as effective as possible and, further, to permit of fundamental research projects which might exhaust the total amount of the grant or its substantial portion, the grant has not been allotted directly to the provinces. The Grant is administered by the Department with the assistance of the Dominion Council of Health and a technical Committee appointed by this Council.

Projects were submitted by the provinces themselves or by universities or other research bodies, but were sponsored by one or several provinces.

The Province of Quebec submitted three important projects, one of which dealt with the study of new methods of B.C.G. vaccinations, another with frequency of tropical diseases in hospital population in the province, and the third was a study of neurotropic virus to establish the incidence of poliomyelitis and aequine encephalomyelitis in the sera of children and adults and also (in some regions) in horses and hens.

Ontario submitted eight projects dealing with a variety of subjects, among which the studies on food utensils sanitation, on effectiveness of topical application of sodium fluoride in the control of dental caries, on vision testing procedures, on the role of sewage and water supplies in the spread of poliomyelitis, on hormones and their relation to disease, should be mentioned.

Two projects submitted by Manitoba included studies on rural domestic septic tanks and on nitrates in ground waters.

Saskatchewan proceeded with studies on nutritive value of milk on a year-round basis with respect to calcium, phosphorus, vitamin A and riboflavin content.

The other project submitted by this province dealt with the use of radio-isotopes to determine the efficiency of commercial detergents for dish-washing in public eating places.

An extremely important study was initiated in British Columbia, dealing with the evaluation of the Wetzel Grid in school health services. The aim of the study, which embraces 8,000 children in the Central Vancouver Island Health Unit, is to offer guidance in the practical application of the grid.

In all, 16 allotments were made under this Grant, totalling \$67,230.

While not allotted to the provinces on any fixed basis, this money was designed to further research projects in five provinces which had submitted plans for approval. Grants varied from a minimum of \$600 to a maximum of \$35,598.

Amounts approved for Public Health Research represented 67.2 per cent of the total of this Grant for 1948-49.

## CANCER CONTROL GRANT

The Cancer Control Grant was \$3,500,000. Although discussion had taken place at the 1945 meetings of the Dominion-Provincial Conference in respect to the possibility of a cancer grant as part of the over-all health proposals made at that

time, a grant for work in the cancer field was not included in the proposals. In the reconsideration of assistance to the provinces by way of grants in aid in the public health field during 1948 it was thought desirable and necessary to include funds for this purpose.

The purpose of the Grant is to assist all provinces in improving their present efforts in the cancer control field, in order that there could ultimately be established in every province in the Dominion an adequate programme to ensure that no person who thought he was, or who might be, suffering from cancer, would be denied the necessary assistance that he required for the detection, diagnosis and treatment of cancer, regardless of where he might live or his ability to pay. Under the provisions of the Order-in-Council in respect to the Grant, this was to be accomplished by the province being allowed to obtain from Federal funds, up to the maximum of their allotment under the Grant, one half of the total expenditures made by the province or its constituent municipalities in cancer programmes.

Under the provision of the Order-in-Council, where a province furnishes a programme or projects in connection with a programme, which are approved by the Minister, the province will be entitled to receive one-half the cost of such programme or project on the submission of the necessary statements of claim.

Every province in the Dominion has taken advantage of funds available to them under this Grant. The amounts requested by the provinces varied from the total allotment of their Grant in one province down to less than five per cent in another. In the portion of this year after the National Health Programme was announced, the provinces were reorienting themselves to determine what they needed in order to make their attack on cancer an effectual one, and, as a result, the types of projects submitted varied considerably.

One of the first and most important decisions made by the provinces was in respect to a grant to the National Cancer Institute of Canada to the extent of seven per cent of their share of the grant. During 1948-49, six provinces made a contribution on the basis outlined above (no contribution from Ontario, Manitoba and Saskatchewan). This, it is believed, is one of the most useful ways for the province to use at least some of its allotment, as a well designed research programme is essential to any long term cancer control programme.

Nearly every province was providing some service in the cancer field, either directly or through some Provincially-recognized cancer organization. In four of the provinces the organizations in operation had their services extended by means of grants directly made to them by the province. Two provinces provided hospitalization to patients suffering from cancer, from funds available under the Grant. In nearly every province improved pathological services were provided, particularly in respect to the provision of free biopsy service for the determination of whether or not any given tumour or tissue was cancerous in nature.

Most of the provinces increased their diagnostic and therapy equipment by the purchase of most up-to-date X-ray equipment in these fields. In some of the provinces the extension of the existing provincial laboratories was made possible by funds from the Grant, in order that the laboratory service, as it had to do with cancer detection and diagnosis and control, might be extended to provide adequate facilities in this field. In one of the provinces, where the programme was fairly complete, its share of the Grant was of direct assistance to it in reducing public health expenditures by the amount of the Federal Grant, thus allowing this money to be used in other directions in the health field.

In two of the provinces funds were used for the training of personnel. In one, a two-year course was granted to a medical man in order to qualify him to head up the Division of Cancer Control in his province. In another province, funds were made available for members of the staff working in the cancer control programme to visit centres where new methods were being established in the field of cancer, in order that the staff of the organization might be kept thoroughly up to date.

From the use of the funds available to the provinces in the fiscal year 1948-49 it would be safe to assume that, in the very near future, at least five more of the provinces will have complete over-all programmes for cancer control, this to include detection centres, complete diagnostic facilities, and complete treatment facilities, consisting of the use of radium and X-ray therapy, as well as surgery. In every one of the provinces, emphasis is to be placed on the education, not only of the public in respect to the problem of cancer, but also the education of those working in the general medical field, in order that every physician may have increased knowledge to assist him in trying to determine whether or not any patient who comes to see him should or should not have further examination in respect to the possibility of detecting cancer.

Sums totalling \$901,636.46 were provided to assist Cancer control projects in 1948-49. The maximum amount of \$234,671, or 100 per cent of its share, was requisitioned by Saskatchewan.

The sums allocated this year represented, in all, 25.7 per cent of the money made available under this Grant.

### OTHER HEALTH GRANTS

Since its administration was an integral part of the functioning of that service, detail of the VENEREAL DISEASE CONTROL GRANT will be found in the HEALTH SERVICES section of this Report dealing with the Venereal Disease Control Division.

A review of implementation of the TUBERCULOSIS CONTROL GRANT is contained in the HEALTH SERVICES section of this Report dealing with the Venereal Disease Control Division, the Chief of which was also concerned in the administration of that particular phase of the National Health Programme.

### SUMMARY

Of the \$30,120,300 made available under the National Health Programme for the seven months' period of the fiscal year 1948-49, the provinces requested and received approval for the utilization of \$15,430,497, between them. Thus, 51.2 per cent of the funds available were requisitioned during the year.

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## FOOD AND DRUGS

Approaching the 75th. anniversary of the passing of the first Adulteration Act on May 26, 1874, the Food and Drug Divisions looked back this year with some measure of satisfaction at the progress which had been achieved during three-quarters of a century in protecting the people of Canada from impure and unwholesome foods, from adulterated and worthless medicines, and from misrepresentation and fraud with regard to both.

Whereas virtually nothing was known about food analysis or food standards 75 years ago, today there is no country in the world where the people's interests in this field are better looked after than in Canada. From the Atlantic to the Pacific a network of inspection offices, regional laboratories and district headquarters forms a complex organization, with its nerve centre in Ottawa, devoted wholly to the purpose of ensuring pure food and safe drugs for Canadians.

The year just closed has been one of advancement. The situation at Ottawa with regard to accommodation has been improved by use of the space released by the Laboratory of Hygiene, with the result that some of the sections in contemplation have been organized and are beginning to function. However, space at the central laboratories is still far from sufficient for the full complement of personnel necessary to carry out the programme that has been laid down, and it is hoped that construction of a new building to house this directorate will soon be undertaken. Rearrangement and extension of the directorate's premises in Vancouver have made possible the employment of extra professional staff and the regional Food and Drug office at Winnipeg is being moved to more commodious and convenient quarters.

### *Work Increased*

In spite of these handicaps, the total number of samples and import shipments inspected increased from 64,976 in the previous year to 77,426 or by 19 per cent, while samples actually submitted to the laboratories were 27,170, as compared with 23,828 in 1947-48, an advance of 14 per cent. The proportion of adulterated samples is somewhat higher than usual, namely 3.5 per cent, due, it is believed, to extensive examinations of canned goods and imported fruits and nuts which were found contaminated with extraneous matter. Detail of all the work will be found in Tables 12 to 15 Pages 157 and 158.

The closest possible liaison continues to exist between the directorate and its counterpart in Washington, the United States Food and Drug Administration. When it is suspected that defective food and drugs refused entry to the United States are being directed to this country, Canadian authorities are immediately notified and Canadian officials reciprocate if defective consumables are apparently headed for the United States.

Last spring, it became known that an intravenous solution of glucose put out by an American company was contaminated. Canada was notified of the incident by officials in Washington and every effort was made immediately to track down and impound any stocks of the adulterated batch which might have reached this country.

#### *Emergency Action*

More recently, it was discovered in the United States that substitutes for common salt, for use by people on a low sodium diet, contained lithium chloride which is poisonous and which had caused some fatalities across the border. The United States Food and Drug Administration warned Canada without delay and a search for these products was put in hand forthwith.

A further incident occurred which provided an example of the cooperation extended to the directorate in its work by manufacturers, even at the cost of losing business. One manufacturer, having heard independently of the danger of salt substitutes, called the Director of the Food and Drug Divisions by long distance to say that, although he had just manufactured a substantial amount of such a product, if the department considered it unsafe he would not attempt to sell it.

Another case worthy of record was that of a firm undertaking the manufacture of a potent drug. A company director advised the department of its dangerous nature if used without medical supervision and suggested that the product should be added to the list of drugs which can be sold only on prescription. He realized that such a limitation would reduce sales materially yet, in a true spirit of integrity and regard for the common good, this business man put forward the restrictive recommendation. It was acted upon and the good citizen thanked.

#### *Public Co-Operation*

It was a matter of satisfaction to enjoy such public-spirited co-operation and to have consumers and the trade come to the Food and Drug directorate with their problems. For example, the attention of the administration was directed by a hospital physician to the dangers of an anti-sclerosing agent. Investigation disclosed that, while this preparation enjoyed considerable vogue during the war, its defects were becoming apparent and that it had been replaced in the British Pharmacopeia by another product free from such defects.

The establishment of an Information Section in the directorate's Inspection Services has been of great help not only to headquarters but to the field staff. Preparation and distribution by this section of staff and trade information letters is proving useful in keeping the regional directors, inspectors and the trade aware of changes in regulations and in the interpretation of Acts and Regulations. The new section also provides an excellent service in accumulating, indexing and distributing information about imports and domestic products.

Inspection Services were also busy preparing an inspector's manual. This is a difficult task since the material to be included must be carefully selected and scrutinized both for its accuracy and usefulness.

Laboratory Services undertook the compilation of a book of official methods used in making analyses for enforcement purposes. This book will be useful to the trade as well as to the Food and Drug laboratories.

Incidents cited above, as well as the work reviewed in this Report, are ample proof that the efforts of the last 75 years have not been in vain: that the modest

cost of this directorate to the people of Canada, amounting to less than one-half cent per month per head of population, is a very worth-while investment to ensure pure foods and safe drugs.

### INSPECTION

*"Atomic in its effect in the most desperate cases."* This startling claim made for a distemper remedy was part of the evidence in one of the year's prosecutions of unusual interest. The facts in brief were as follows:—

A firm in Eastern Canada, which, among other things, manufactured hair preparations, produced a remedy for distemper. The colourful assertion cited above was among the claims advertised for this remedy, which was represented to be a drug. As no known drug is effective against the distemper virus, the preparation was analysed. It was found to contain a mixture of harmless and ineffective chemicals. By no stretch of the imagination could it have any value in the prevention or treatment of distemper. Indeed, the discovery of a drug which *would* prevent or cure distemper would be a veritable boon to the fur industry of Canada. Distemper is, possibly, the cause of the biggest single loss to fur ranchers and a simple preventive treatment would undoubtedly save that industry hundreds of thousands of dollars.

Apart from the fact that the remedy could be of no benefit and was, therefore, a waste of money, the nature of the advertisement itself was considered to invite possible serious consequences, as the use of the preparation might well delay recognized treatment to a point where such treatment would be ineffectual. There was also the added objection that the method recommended for its use could well have the effect of spreading the disease to animals which might otherwise have escaped it.

A charge was laid under Section 406 of the Criminal Code. Under this Section, any advertisement containing a statement relating to the performance of a product, for the purpose of promoting its sale, constitutes an offence unless such statement is based upon adequate and proper tests. The Section, moreover, places the onus upon the person responsible for the advertisement. Notwithstanding the fact that the proof of value rested upon the defendant, the Department of Agriculture conducted a series of clinical tests with the remedy in question on animals which had been infected with distemper virus. All animals used in the test, and treated with this preparation, died: the remedy neither prevented nor stopped distemper.

#### *Expert Evidence*

This case involved evidence from officials of the Department of Agriculture and from the Food and Drugs laboratory, as well as by a world-famous authority on virus diseases. The defence vigorously attempted to assert that the remedy had proven successful in a number of cases and that this constituted evidence of adequate and proper tests. On cross-examination it was by no means established that the animals which had been apparently cured had suffered from distemper at all, and the Court repeatedly noted this point. In any event, it was known that a certain percentage of animals so infected recover normally, in due course.

Apart from the above features, this case was most interesting in that it illustrated the heavy responsibility which a manufacturer should be prepared to assume in making claims for the performance of his product. The case was carefully followed by representatives of the fur industry who thus learned of the worthlessness of all such so-called distemper remedies. Penalties were imposed and the offending preparation was withdrawn from the market.

This prosecution was of special value, apart from the successful result obtained, in that it was used in discussing a number of other advertisements in which it was considered that extraordinary claims were being advanced. With this precedent, no difficulty was experienced in obtaining modification of untested claims. It is

thought, also, that this Section may be used to advantage in the case of claims being made for new drug preparations. It would be difficult and expensive for the Department to maintain laboratories in which to conduct tests for all the many new drug preparations brought on the market. It is felt that responsibility for guaranteeing the safety and performance of such preparations should be on the manufacturer and not on the Department. It is not believed that the onus placed on the manufacturer, under the Section, is unfair in any way. It would be quite unreasonable to require the Crown to prove a negative. It would seem to be quite just to demand that claims made to the public be founded on real tests rather than on fictitious slogans designed to serve as selling points.

Inspection Services had better success this year in recruiting scientists for vacant staff positions. The posts formerly classified as *Grade 2 Inspector* was re-advertised as *Grade 1 Chemist (Inspector of Food and Drugs)* and this evoked a moderate response from qualified science graduates, so that the ranks of this service are now being filled. In Ottawa, a senior examiner and an examiner have been obtained, as well as a supervisory inspector whose task is to report on the field staff to ensure that, with the increased tempo and volume of work, efficiency and uniformity of the Inspection Services are maintained.

Perhaps because proposed changes in regulations were made known to the industries concerned, there has been a marked increase in the number and extent of interviews with those seeking information as to the impact of changes upon labelling. In most cases, such interviews continue to be most profitable to all concerned. However, it appears that the advice of Inspection Services is sometimes sought with the object of finding out how far statements can go without violating the law. An example of this was the appearance of advertisements featuring "Dietary Reducing Plans". Read reasonably carefully, these advertisements are seen to recommend only a diet for reducing which, whether sound or not, is not a subject that touches the Food and Drugs Act. The tablets, it will be noticed, are recommended only to such people as feel that, if they embark upon a reducing diet, they may be short of some vitamins or minerals. The advertisements do not claim that the tablets have any function in reducing. Any person learns what diet is recommended from the first purchase of tablets and is under no obligation to buy any more tablets whatever.

This year the Inspection Services received an exceedingly large number of enquiries and gave numerous interviews concerning the labelling, etc. of margarine.

Because of the current interest in the use of Vitamin E, as reported in the press, the revision of the vitamin regulations, with its changes respecting Vitamin E, proved to be timely.

This year a positive plan was initiated whereby inspectors visited radio stations to inspect radio commercials on behalf of the Canadian Broadcasting Corporation. Cordial relations thus established with radio people brought profit to all.

## LABORATORY

### *Alcoholic Beverages*

Work in connection with the revision of alcoholic beverage regulations was particularly heavy during the period under review, no all-round revision having been undertaken for many years. The task was carried out in collaboration with the Customs and Excise Division of the Department of National Revenue, various branches of the industry, and the provincial authorities, and involved much negotiation and correspondence, and many meetings and discussions.

Heretofore, although an aging standard for whisky had been observed, there was no requirement as to the minimum age in the Food and Drug regulations, nor were conditions of storage while acquiring age laid down. This has been accomplished in the revised regulations. Wine-making is a flourishing industry in some sections of the country, and although it has been efficiently controlled by provincial

authorities, it was felt that an adequate set of regulations would aid and supplement those of the interested provinces.

It is felt that the revised alcoholic beverage regulations as a whole will tend towards improvements in the standards of quality.

In the laboratory a review of domestic wines was commenced after the conclusion of the work of revision, and complete analysis has already been made of seven samples.

### Biometrics

A position had been established for the head of the Biometrics section but efforts to obtain a statistician with suitable educational qualifications were unsuccessful until recently. A suitable candidate has finally been accepted and will commence work on July 1, 1949. Pending the filling of the position advice was obtained from the National Research Council on sampling, and working in cooperation with the Council, sampling schemes for dried fruit, nuts and canned goods were studied. Data on the characteristics of the material have been collected and it is hoped that practical methods of sampling will be developed which will require less work and be as reliable as those now in use.

### Biophysics

This section was organized recently, a programme has been laid down which will include the investigation and examination of appliances used in medicine and dentistry and work is under way. In the meantime, work on anaesthetizing machines is in progress.

### Cosmetics

Proclamation of certain portions of the amendment of 1939 of the Food and Drugs Act has brought cosmetics under the authority of the Act and regulations respecting them will be prepared as conditions warrant. Owing to uncertainty in regard to the date of proclamation, which finally proved to be May 2, 1949, no systematic work on this class of products could be planned this year, although a number of miscellaneous samples were examined for one reason or another.

A line of estrogenic hormone cosmetic preparations came in for some attention. The manufacturer was induced to reduce his dosage to what, in the light of present knowledge, would seem to be a safe level, and to withdraw one preparation from the market except for use under medical supervision. Pre-occupation with the work of revision of other sections of the regulations was also a factor in limiting the amount of laboratory work that could be attempted by this section.

### Food Chemistry

A food chemist was appointed in August, to take charge of the Section of Food Chemistry in the Ottawa laboratory, with special reference to research undertakings. From the point of view of volume and of concern to the man in the street, food chemistry is most important, because it embraces not only research projects but the day-to-day analysis of food in all the laboratories across the country. This work affects each citizen every time he sits down to eat. It is thus manifestly impossible, in a brief report, to discuss more than a few items, but the table indicates the wide scope of this field.

*Raisins.* A method has been developed for the estimation of mineral oil on raisins by which it is possible to determine less than 0.1 per cent of this material. Mineral oil has been added to certain imported raisins at levels of less than 0.5 per cent to prevent sticking, reduce sugaring and discourage insect infestation. Edible vegetable oils may be used satisfactory for this purpose but shortages during the past few years have prevented their use. Mineral oil, continuously used in food, is open to objection on health grounds. However, the world supply of edible oils has now improved considerably and it was found that raisins entering Canada in 1948, from sources previously employing mineral oil, were treated with vegetable oils.

*Shortening.* Sometime ago the Veterinary Director General reported a brand of shortening in Quebec City which was adulterated with mineral oil and had a quantity detained in that City. An inspector from the Toronto office visited the manufacturers in Toronto and placed  $2\frac{1}{2}$  tons under seizure. This was also found to contain mineral oil to the extent of 20 per cent. Following conviction of the manufacturers (their fourth offence) the inspector called to collect the shortening for destruction but found it had disappeared. Investigation by the R.C.M. Police revealed that it had been worked into lard in the proportion of 5 per cent and sold as lard to Toronto bakers. Action against the company was taken for tampering with a seizure and for selling adulterated lard. Penalties totalling \$500 were imposed.

*Figs, Dates, Nuts.* These delicacies usually enter Canada in large consignments up to a shipload at a time. In order to arrive at a just assessment of their fitness for human food, an elaborate procedure for sampling and analysis has been worked out. They should be free from insects or insect parts, filth, mould or decay. As it is virtually impossible, in practice, for every date or fig in a 2,000-ton lot to be perfect, a tolerance of defective units, set at a low percentage of the whole, is permitted. Sometimes it is necessary to examine individually as many as 200 dates from each 70-lb. box inspected, or 500 figs from a proportionate sample of the shipment, before a decision can be reached. In each case these 200 dates or 500 figs must be wholly representative. During November, December, and January, over 40,000 figs and dates were individually examined in the Toronto laboratory.

*Pork and Beans.* A brand of pork and beans was found to contain much more extraneous matter, such as dirt, stones, cereal grains, etc., than is consistent with good factory practice. The owner protested that they were as good as any on the market and questioned the analysis. He requested permission to have his own chemist present when the duplicate referee analysis was made. This was granted. Before proceeding with the official duplicate sample, six tins each of eight different brands were examined. Not a single stone was found in any of the 48 tins, nor any dirt. The only foreign matter consisted of one buckwheat grain and one textile fibre  $\frac{1}{2}$ " long. The official referee analysis yielded results that confirmed the original findings and satisfied the observer as to the correctness of the decision to condemn the lot.

*Sausages and Hamburger.* During the past year, the ceaseless campaign against adulterated meat products has been pursued. Important prosecutions against a well-known packing plant were brought to a successful conclusion in the two Western regions.

Research proceeded in the Montreal laboratory in connection with the methods used for the determination of cereal in meat products and the relationship of length of storage to the results obtained.

A request was received for permission to use soy flour in sausages as an alternative to the cereal products already permitted as binders. However, before reaching a decision in this matter, methods for the detection and estimation of soy flour in meat products have been investigated. No entirely satisfactory method has been developed and work on this project is continuing.

*Molasses.* A considerable amount of work was carried out on the determination of moisture in imported molasses. Regulations under the Food and Drugs Act stipulate that molasses shall not contain more than 25 per cent of water, but a number of samples were found to exceed this limit. The procedure employing the refractometer was compared with drying on sand in a vacuum oven at 70°C. It was found that these two methods gave similar results.

*Adulterated Olive Oil Compound.* Olive Oil Compound, valued at \$44,300, was seized in Montreal in the spring of 1948 and was found to contain less than 51 per cent of olive oil. As a matter of fact, it contained only 5 per cent, the remainder being cottonseed and teaseed oils. It was also disclosed that the company concerned had

another \$52,000 of this oil on which a lien was held by a bank. Upon conviction, the oil was released for distribution under conditions laid down by the Department and under the supervision of the Montreal office.

*Trace Metals.* The examination of food and drugs for adventitious traces of metals was continued during the year. In the case of streptomycin, lead, copper, manganese, iron, aluminum, nickel, platinum, and palladium were sought because of possible accidental introduction during manufacture. The analyst reported that the 44 samples examined were generally satisfactory.

Reports from England that sea food was seriously contaminated with lead and arsenic led to an examination of 60 samples from both Atlantic and Pacific coasts, consisting of shrimp, clams, oysters, crab meat and lobster. The Canadian samples contained practically no lead and in no case more than 7 parts per million of arsenic; relatively speaking, an insignificant amount.

*Danish Butter.* A startling report appeared in the Windsor, Ontario, press last December to the effect that Danish butter was being re-worked in margarine factories and other fats incorporated. This story was wholly untrue because no Danish butter left Canadian docks for any destination other than distributing centres. Every one of the six shipments was analyzed prior to entry into Canada and only one was found defective; it contained an excess of water. In no case was foreign fat present.

### Nutrition

One of the many functions of the Nutrition Laboratory is the control and testing of all foods and drugs containing vitamins. To meet this rapidly expanding field frequent changes in regulations governing the sale of these products are necessary.

During 1948 the vitamin regulations were completely re-written and at the same time clarified and condensed. Regulations regarding Vitamin E have been changed in the light of recent developments in that field and folic acid has been added to the list of vitamins which may be used for experimental purposes. Before they became law, drafts of the regulations were sent to the Canadian Pharmaceutical Manufacturers Association and to the Canadian Manufacturers Association and discussions were held with these groups.

In addition to the research and routine testing outlined below vitamin analyses have been carried out on a wide range of materials for agencies such as the Inspection Board of Canada and the Department's Nutrition Services. Methods for vitamin assay were distributed to regional laboratories for routine examination of market preparations. The labelling of vitamin products was checked and, where necessary, referred to Inspection Services for action.

*Vitamin A.* An intensive study of biological methods for Vitamin A has been initiated. These methods include the U.S.P. growth method, the liver storage test and vaginal smear technique. The samples used for the comparison of these methods include a series from a collaborative test carried out by several laboratories in the United States. Officers of the laboratory have taken part in discussions of chemical methods with a view toward selecting the one most suitable for incorporation in the United States Pharmacopeia as an alternative to the biological method. The ultra-violet absorption method with the Morton-Stubbs correction was deemed to be most generally satisfactory for this purpose.

The laboratory also took part in collaborative studies on the extinction value of the Canadian Standard for Vitamin A and the various Pacific Fisheries Experimental Station Standards. Besides this research the laboratory has continued routine examination of various types of preparations bearing Vitamin A.

*Vitamin B Group.* Multivitamin preparations were analyzed for their content of thiamin, riboflavin, niacin, pantothenic acid and folic acid. The results of statistical studies of micro-biological assay methods were published. Biological studies of the effects of the addition of B vitamins to flour with and without agene treatment are continuing.

*Vitamin C.* Routine examination of pharmaceutical preparations was continued, using methods developed previously in this laboratory.

*Vitamin D.* A comprehensive comparison of various standards used in the estimation of Vitamin D was set up a year ago on an internal scale with a view toward the selection of a more satisfactory international standard. Samples studied included the old International Standard (calciferol), the U.S.P. Standard Cod Liver Oil, the British Standard Solution of Vitamin D<sub>3</sub>, and a commercial sample of crystalline D<sub>3</sub> in oil. The laboratory spent several months working on this collaborative experiment, using the usual line test. The comparison should do much to clarify the relationship between existing standards.

Several variations of the rat test for Vitamin D have also been studied, among them the X-ray diagnosis of rickets. This technique has proven helpful in numerous ways. The effect of changing the calcium content of the diet of test rats and of the breeding females is also under investigation. The data indicate that an increased amount of calcium in the diet of the assay animals results in better development of rickets than was obtained previously with a lower amount. Routine tests of fish oils and other Vitamin D preparations have also been made.

*Vitamin E.* During the year clinical studies on a wide variety of conditions have been reported which suggest that Vitamin E may be concerned in many functions of the body. Although much of the work is controversial large quantities of Vitamin E are being used. Methods of chemical and biological assay are being studied with a view toward assuring the reliability of products available.

*Bread and Flour.* Samples have been checked for vitamin content and for moisture, ash and protein, both routinely and in connection with complaints received from various sources.

*Proteins and Amino Acids.* Discussions have been held with the Amino Acid Advisory Committee of the United States Pharmacopeia regarding methods for assay and tests of safety of protein hydrolysates and amino acid mixtures with a view toward the development of suitable legislation for their control. The results of studies on the microbiological assay of valine have been published.

### Organic Chemistry and Narcotics

As a result of the reorganization of the Food and Drug Divisions, a new unit, the Organic Chemistry and Narcotic Section, has been established. Besides acting in an advisory capacity to other sections on problems of an organic chemical nature, there are two main functions of this Section. First, to undertake fundamental organic research in fields allied to the work of the Divisions as a whole, and second, to investigate methods of analysis for narcotics. With regard to the narcotics, this Section is responsible for technical problems arising from the administration of the Opium and Narcotic Drug Act, 1929. In other words, chemical problems may arise concerning the schedule of the Narcotic Act, usually involving qualitative organic analysis, but sometimes including such questions as addiction liability, theories of drug action and problems of a like nature.

Besides the routine analysis of samples suspected to contain narcotics, which are submitted by the R.C.M. Police, tests have been devised for the identification of a morphine-like compound, Metopon. This work was reported in a paper submitted to the *Journal of the American Pharmaceutical Association (Scient. Ed.)* to be published in July or August. Other synthetic analgesics with addiction liability will soon be available, for example, there have been tested about twenty compounds similar in chemical structure to either Demerol or Amidone which show addiction liability similar to the opiates. A revision of the Schedule is at present being undertaken to include these new synthetic organic compounds which have been found to be dangerous drugs. Eventually chemical tests will have to be devised for the identification of these compounds and this points the way to the kind of investigation which will be under way in the near future in the Organic Chemistry and Narcotic Section.

## Pharmaceutical Chemistry

Owing to the difficulty of finding a suitable person to take charge, this section has not yet been reorganized. Consequently, work in this field during the past year has been limited to that performed in regional laboratories and was almost entirely of a routine character. It is expected that the services of a competent pharmaceutical chemist will be available this year.

The discovery, in the Winnipeg laboratory, that the quantities of two potent ingredients in a well-known "hang-over" remedy had been reversed led to an interesting study of the method used for their isolation. The method was checked by making up the preparation in the laboratory and analyzing it, with the result that the amounts put in were separated with tolerable accuracy. Corroborative work in this direction is going on in the Montreal laboratory.

Routine surveys of tablets of acetyl-salicylic acid and sulphadiazine were made in Montreal and Vancouver. These revealed that the Canadian public can rely with confidence on such products. Calomel tablets did not present quite as satisfactory a picture inasmuch as an appreciable number of those examined fell outside the limits of variability permitted. A fairly extensive review of epsom salts in British Columbia confirmed the necessity for relaxing the regulations to permit a limited amount of drying out, which would give the crystals a snowwhite appearance and which does not reduce the efficacy of this much-used drug. A number of vitamin preparations were found below standard by the Winnipeg laboratory and appropriate corrective steps were taken. In addition, the continuous surveillance of unstable products, such as sweet spirit of nitre, aromatic spirit of ammonia and tincture of iodine, has been maintained.

## Pharmacology and Toxicology

*Arsphenamines and Related Products.* In addition to the routine analysis of all lots of these products sold in Canada, a study was undertaken of a new method for determining the toxicity of neoarsphenamine. The proposed method is based on the survival-time of rats. Either the actual time of death of each rat during a 10-hour observation period or deaths recorded at one-hour or a two-hour intervals for 10 hours may be used as the basis for computing toxicity. It was found that this proposed method was satisfactory for estimating the toxicity of most lots of neoarsphenamine but, for some lots, the estimated toxicity is considerably less than by the present official method. Although this discrepancy is only evident in a few lots assayed, it seems that this fact is somewhat of a deterrent to general acceptance of the method in place of the present official test. It is quite possible that closer agreement might be obtained between the official test and the proposed method for some of the other arsenical products. A report on this work, was presented at the Annual Meeting of the American Pharmaceutical Association.

Some imports of neoarsphenamine could not be certified this year because of toxicity and instability.

The preparation and testing of a new standard for oxophenarsine hydrochloride was completed during the year. A portion of this standard was sent to the Division of Biological Standards in London to be used for testing purposes in England.

Considerable time was spent on the development of a method for evaluating the curative action of neoarsphenamine. The inhibition of glucose metabolism by trypanosomes in the presence of trivalent arsenical products was the basis for the test. Work on this method is still in progress. The results of a number of replicate assays on several brands by the proposed method seem to show satisfactory agreement between assays.

A new Canadian Standard for neoarsphenamine has just been obtained and after checking the physical, chemical and toxicological properties of this lot in terms of the International Standard it will be released for use.

*Heparin.* Three proposed methods for the assay of this anti-coagulant were investigated during the year. This study was carried out in collaboration with the U.S.P. Revision Committee. The purpose of this investigation was to find out if one of these methods, or some modification of one of them, would be a suitable method for inclusion in the next Revision of the U.S.P.

The three methods differed chiefly in the end point in the titration and the coagulating medium. Beef and sheep plasmas were the coagulating media.

In Foster's method the degree of clotting in each tube is estimated and these estimates are plotted on a log-probit scale. In Warner's method the degree of clotting is estimated in each tube after the clots have been broken away from the sides of the tubes and allowed to settle. These estimates are plotted on an arithmetic scale. For Kuizengas' method the end point in the titration is the dose of Heparin which retains the contents of the tube in a fluid state.

In spite of the difficulties encountered in estimating the degree of coagulation the mean potencies for the several methods agreed reasonably well.

The conclusions and recommendations of this Committee were as follows,—

1. The proposed U.S.P. Reference Standard for Heparin has been found to contain 96 International Units per milligram based on the weighted average of all tests.

2. The following factors all contribute to a lowering of the standard deviation (or standard error): (a) use of sheep instead of beef plasma; (b) use of silicone-coated tubes instead of plain glass; (c) employing the dose-response end point (CC50) instead of the all-or-none end point; (d) use of an amount of sodium chloride stoichiometrically equivalent to the amount of sodium citrate used (slight errors in this appear to be inconsequential).

3. A two-hour assay time and an assay temperature of 37°C. are recommended.

4. A test should be repeated four times to be considered a complete assay and the standard should be run concurrently with the unknown in each test.

5. Closest agreement was obtained in the results by the Kuizenga and Foster methods. It is concluded that discrepancies among the methods are due not to real differences in potencies found but to the magnitude of variations by some of the methods.

6. A suggested tolerance range is  $\pm 3$  per cent.

*Cardiac Drugs.* A comparative study between the proposed pigeon method and the official cat method on all the pharmacopoeial digitalis products was completed during the year. The two methods gave results which were in fairly close agreement for most of these products. For the whole-leaf products the maximum difference was found to be 19.9 per cent. The majority of the samples differed from the cat method by less than 10 per cent. The differences reported were not significant. For the assays reported pigeons were found to be less variable than cats and, as a result, fewer pigeons were required to meet the present U.S.P. requirement.

The U.S.P. Revision Committee conducted two collaborative studies on the pigeon and cat methods during the year. This laboratory took part in both of these studies. The agreement between the collaborating laboratories on the first study was much better than on the second.

For the second collaborative study six samples were distributed to 16 laboratories. These samples consisted of tinctures, tablet and powder preparations. The results showed considerable variation. It was surprising that the poorest agreement between laboratories was seen in these samples about which there is the least question as to their homogeneity. One possible explanation is that most collaborators chose these two samples to assay first. Since the procedure was new to many, the results may reflect the difficulties encountered in learning the new method. In spite of the relatively wide variation in observed potencies (the low-to-high range being

nearly 100 per cent and far greater than would be expected in normal sampling), Sample 2 was found to be 83.7 per cent of Sample 1, which agrees well with the known ratio of 80 per cent.

The results on Sample 3 were excellent. In Sample 4, three laboratories reported potencies widely different from the eight other values reported, two of which were from the same laboratory. However, the report of Laboratory 1 clearly shows that the tincture was made up from the tablets in an unusual way, so this may have accounted for the very low result. The very satisfactory agreement between laboratories on Samples 5 and 6 matches that observed on Sample 3.

The Director of the Division of Biological Standards at the Medical Research Council asked this laboratory to take part in assaying the new (Third) International Standard Digitalis against the current standard (Second) which was released in 1936. Five laboratories in the United States also took part in this study. They all compared the two standards on pigeons and cats. The agreement between the two methods was very good. Both test animal showed the same potency ratio; on cats, the new powder is  $109.3 \pm 3.3$  per cent of the 1936 International Standard Digitalis and on pigeons the value is  $107.7 \pm 2.2$  per cent. These two values are not significantly different. The new proposed standard is slightly but significantly stronger than the current standard. This will mean that a slightly different "factor" will be necessary for using the new powder on its release. The current standard carries the factor of 1.25, i.e. 80 mg. represents 1 International Digitalis Unit.

Several possible variables in the assay technique of the pigeon method were investigated.

It was found that an alcoholic concentration up to 15 per cent could be used without affecting the response of pigeons to digitalis. There was no differences in the response of pigeons perfused with tincture of digitalis under no anaesthetic and those anaesthetized with light ether anaesthesia, but when sodium phenobarbitol was used in place of ether, a significant change in the response of the barbitol group was observed. Pigeons weighing between 250 and 300 grams and 400 to 450 grams did not differ in their response to digitalis. Pigeons from the same source have been kept in the laboratory for four months without showing any significant change in their response to digitalis.

*Pituitary Extract (Posterior Lobe)*. In collaboration with the Committee on Physiological Testing of the A.Ph.A. the effect of preservatives and room temperature storage on the stability of this products was studied. It was also an opportunity to evaluate the B.P. and U.S.P. methods for preparation of this standard. The study has only been under way for three months and no change has been detected in the samples stored at room temperature, prepared according to the U.S.P. method which requires intermittent sterilization, and those samples in which preservatives were added. Pituitary Extract (post. lobe) prepared according to the methods of the B.P. and U.S.P. produced extracts of the same potency.

The Committee recommended that in view of these findings the extract of the reference standard for the official assay of posterior pituitary preparation be made to contain 0.5 per cent chlorotone as a bacteriostatic agent and that the fractional sterilization on three successive days be dropped as unnecessary.

Last year this laboratory sponsored a collaborative programme for the Committee on Physiological Testing of the A.Ph.A. on the toxicity testing of a few drugs. The results of this investigation were presented at the Annual Meeting of the A.Ph.A. in September, 1948.

In brief, the conclusions were as follows,—although drugs may be tested under as nearly as possible identical conditions in different laboratories, the LD50 estimates will vary significantly. A method designed so that it estimates the relative toxicity of a new drug in terms of a similar acting drug of established use is a more reliable index of toxicity than a comparison of LD50 values obtained at different times within the same laboratory or from different laboratories.

*d-Tubocurarine Chloride.* These products sold on the Canadian market were examined for the presence of cardiac depressants, bronchio-constrictors, histamine-like and histamine-releasing substances and convulsants. Of all the brands examined no differences could be detected in them. There was no evidence of any of these toxic properties.

A new solvent reported to have been effective in delaying the absorption of morphine and some of the other opiates was tried as a solvent for d-tubocurarine chloride. It could not be shown that it had any effect on the absorption of this drug in rats.

*Adrenal Medullary Tumours.* In cooperation with a local hospital assays were carried out to estimate the amount of pressor activity in extracts of these tumours. In two instances the amount of pressor activity was about the same as reported in the literature but in another case the presence of any pressor substance in the extract could not be determined, although apparently histological examination had shown that it was a typical medullary tumour.

*Antabuse.* The narcotic properties of several lots of Antabuse were investigated in guinea pigs. Due to the insolubility of the material in water a suspension in glycerin was given orally on two successive days prior to the injections of alcohol. It was possible to observe the narcotic effect of the drug after the injection of alcohol. Of the several lots tested there did not appear to be any difference in the onset of narcosis in guinea pigs or the duration of the effect. Additional experimentation is required before this can be definitely proven.

### Physiology and Hormones

*Oestrogens.* Collaborative work was carried out with the Revision Committee of the U.S.P. on a proposed method for the biological assay of oestrone and on a proposed chemical method for the determination of oestrone.

The results showed that the biological assay method was superior to the chemical method with respect to precision.

The project on the study of the variables affecting the assay of oestrogens was continued with the determination of the regression line for the oestrogens, doisyolic acid and meprane under different conditions of administration.

Work was continued with the Poultry Division of the Department of Agriculture on the deposition in the fat of poultry of ingested stilbestrol compounds. No significant difference in the retention of these compounds was found by male, female and caponized birds. A survey of the potency of market samples of oestrogens was made.

*Androgens.* The project completed on the variables affecting the assay of testosterone propionate was submitted for publication and appeared in *Endocrinology*, 44:225, 1949. A project to study the effect of stilbestrol on seminal vesicle response to testosterone propionate was begun. It was found that stilbestrol enhances the response to testosterone propionate.

The results of the collaborative study conducted by the U.S.P. Revision Committee, in 1947, showed considerable variations between laboratories and, as a result, a second collaborative study was initiated this year, employing the modification shown by this laboratory to yield more precise results. This work is in progress. Samples of testosterone propionate were assayed for the Inspection Board of Canada.

*Gonadotrophins.* A study was made of the uterine weight method and the ovarian weight method for the assay of chorionic gonadotrophins and the gonadotrophins from pregnant mares' serum. The uterine weight method was found more applicable as a routine assay method.

A project was initiated in collaboration with the Laboratory of Hygiene in a study of the pyrogen content of market samples of chorionic gonadotrophin and equine gonadotrophin. It was found that some of the market samples of these products contain appreciable amounts of pyrogens.

*Progestins.* A study of the precision of the chemical method for the assay of progesterone, employing the precipitation of the steroid as the phenylhydrozone, was made. The method proved satisfactory and a survey of the potency of market samples of progesterone was made.

*Insulin.* The study of the variables affecting the assay of globin insulin with zinc was begun in order to determine if a more practical method could be formulated.

*Liver Extract Injectable.* Protocols of assay from manufacturers were reviewed and the labelling of the product checked.

### The Animal Colony

The rat colony, which was described at some length in last year's report, has been maintained on the same lines. During the year 19,188 rats were raised, at an average cost of .98 cents per rat. The last compilation of cost, made in 1946, showed .59 cents per animal. The increase reflects the general advance in cost of labour, food, and other supplies.

In addition, this section carries about 1,000 other animals for experimental purposes, including rabbits, guinea pigs and pigeons.

### PROPRIETARY OR PATENT MEDICINES

Another busy year was reported by the Proprietary or Patent Medicine Division, responsible for administration of the Act which regulates sale in Canada of all secret formula prepared medicines for internal or external use, by self-administration on self-diagnosis. The primary purpose of this Act is to protect the public against harmful products, fraud and deception, misleading and false advertising.

Since the Act was amended in 1919, approximately 17,000 different preparations have been granted registration. Although, in the intervening years, many of these products have been discontinued from time to time for various valid reasons, at present there are approximately 4,900 preparations licensed for sale, including most of the nationally-advertised proprietaries on which millions of dollars are spent annually by the public. In the main, these medicines are manufactured under efficient supervision in modern factories with large staffs, including highly-trained and qualified technicians.

In granting registration under the Act, care is taken to see that the ingredients used in the formula have value for the purposes for which a medicine is marketed. The recommendations are considered carefully by the medical officers of the department in conjunction with the formula and no claim is permitted for which the formula does not have at least a reasonable amount of value. The use of potent drugs is permitted only when the dosage amounts are prescribed within limits fixed by an Advisory Board as appropriate and safe.

A great deal of time has been spent by the officials of this division in assisting manufacturers or their representatives to prepare their applications, revise labels, wrappers, radio broadcasts and other forms of advertisements for proprietary medicines. Manufacturers, in general, have been cooperative, having found that, in most instances, regulations have proven helpful in that they improve the standards to which proprietaries must conform and thereby increase public confidence in reputable products.

#### *New Products*

New drugs, new drug combinations and new knowledge respecting the action and uses of old drugs gained from research or experience are given consideration by the technicians of the Department, who decide what products may be used with

safety and prescribe limitations where deemed appropriate. In consequence of these investigations it is often found necessary to require revisions to formulae of certain medicinals which have been on the market for a number of years, or to decline a further licence to the manufacturer.

As a result of such an investigation, registered preparations designed for the relief of rheumatic, neuritic and arthritic conditions were again the subject of review and it was found necessary to further limit, as follows, recommendations for the use of these products when sold to the public for self-administration, (a) internal medication containing an adequate dosage of appropriate analgesics may be recommended for the relief of rheumatic, neuritic and arthritic pains, and (b) preparations for external use only and containing analgesics or counter-irritants may be recommended for the relief of rheumatic, neuritic and arthritic pains.

Consequently, a special survey was made of all registered medicines directed to be used in the treatment of rheumatic, neuritic and arthritic conditions, and where it was found that products did not meet the above requirements manufacturers were asked to comply.

The Advisory Board continued to review and to decide whether the medication of liquid medicinals containing alcohol in excess of  $2\frac{1}{2}$  per cent was appropriate or whether it rendered them liable for use as alcoholic beverages; to advise on and fix dosages for scheduled drugs, and to investigate and report as to the suitability of new and uncommon drugs. During the year "bromides" were given special consideration, and the dosages, based on "Sodium Bromide", were reduced to 10 grains (single) and 20 grains (daily).

#### *Radio Advertising*

During the year 8,515 individual radio scripts were reviewed. The Canadian Broadcasting Corporation requires all manufacturers, or their agents, who desire to advertise proprietary medicines over the air, to submit to them a copy of the statements which they propose to make in respect to their products. These scripts are referred to this division and are reviewed. All statements which are considered as exaggerating the value of the product or as describing it for purposes for which it has no value, are marked for deletion.

Continuous supervision is maintained over the various advertising media used to reach the public. During the year 1,689 labels, wrappers and newspaper and other advertisements were examined. All such script and advertising is reviewed with the object of giving the public truthfully-labelled and advertised products, and every endeavour is made to maintain uniformity in official decisions concerning such material.

Samples were secured on the open market and were examined as to quality and quantity of drugs and labelling. The Inspection Service throughout Canada contributed very materially in this work.

During this period 272 new medicinal preparations were submitted for registration. Of this number, 152 were registered and 120 were refused registration. The registrations of 3,737 previously-registered products were reviewed and 3,889 licences were issued in all.

### MISCELLANEOUS

*Revision of Regulations.* At the close of the fiscal year, the proposed revision of the Food and Drug Regulations was in the hands of the Privy Council and was signed a few days afterwards. During the year, the draft had been meticulously reviewed by the Department of Justice, a task of considerable magnitude, due to the necessity for precision and uniformity in phraseology, and it is believed that, when the consolidated edition is published, the regulations will meet with the general approbation of all who have to use them.

The amount of work involved in this revision of the regulations has been very great. Although nearly all sections of the Divisions and the Laboratory of Hygiene

have contributed in a large measure to the knowledge required and in the actual drafting, nevertheless the bulk of the work has been carried by the Inspection Services, who have laboured hard and long at this task.

*Canadian Committee on Pharmacopoeial Standards.* During the year the seventh edition of the British Pharmacopoeia was published and the British Pharmacopoeia Commission has now invited the co-operation of the Canadian Committee in the compilation of the eighth edition. Accordingly the Committee is now considering a list of proposed additions and deletions and has intimated to the Commission in London its desire to be of service.

At its meeting in June, 1948, the Committee offered suggestions respecting solutions of iodine and some inorganic salts containing water of crystallization. Both suggestions have been incorporated in the new Food and Drug Regulations.

Some assistance has been given in the revision of the Canadian Formulary, publication of which is expected later this year.

*Advisory Panel.* A number of problems were referred to the Advisory Panel on Drugs. These included the therapeutic value of bee-venom, the control of arthritis remedies, the safety of a phenol preparation in treating extensive burns, the safety of syrup of urethane as a remedy for coughs and the possibility of dangerous amounts of sulphonamides appearing in the honey from bees treated with these drugs for foulbrood.

*Revenue.* Revenue totalling \$11,353.10 was received from the following sources,—

38 Voluntary Payments.....	\$ 1,395.00
16 Court Cases.....	2,163.10
91 R.C.M.Police—Analyses.....	455.00
Department of Agriculture—Analyses.....	6,800.00
Licences—Biologicals and Antibiotics.....	540.00
Total.....	\$11,353.10

*Public Relations.* The usual happy relations with other bodies have been maintained during the past year. Delegates from the Divisions attended meetings of a large number of technical and learned societies and the laboratories were represented on many committees including the Committee on Applied Statistics and the Food Preservation Committee of the National Research Council and the Endocrine, Insulin and Anti-anaemia Advisory Boards of the United States Pharmacopoeia Revision Committee. Assistance was given in proof-reading the United States Pharmacopoeia.

An illustrated handbook, entitled *Pure Food—Safe Drugs*, made its appearance in 1948. It is written in simple straight-forward language, with the object of telling the ordinary citizen of the work of this agency of government. The book has been well received and sought after by the general public. During the year, in collaboration with the department's Information Services Division, material for a food and drug supplement to *Canada's Health and Welfare* was prepared and assembled.

Addresses have been given by members of the staff on various phases of the work of the Divisions.

Finally, the Director was pleased again this year to express his appreciation of the loyalty and devotion to duty of members of the staff, who gave themselves unsparingly to the work and whose combined efforts made possible the results achieved.



## INDIAN HEALTH SERVICES

There are now approximately 130,000 persons of Indian status in Canada and some 8,000 Eskimo who, while they consider themselves as quite distinct, have been legally grouped with the Indians.

The opinion is still expressed in some quarters that these native peoples are dying out. In the past year their birth rates varied from 30 to 55 per 1,000. Statistical treatment of small groups is not significant but the average birth rate would appear to be from 40 to 45 per 1,000. (For the white population the rate is usually about 25 per 1,000). The death rate from usual causes ranges from 12 to 35 with an average in the neighbourhood of 17 to 20. (A comparable figure for all Canada would be about 9.5 per 1,000). The death rate data, of course, provided an indication of groups needing more intensive care.

Tuberculosis is a much greater killer in the native population up to 30 times more lethal than in neighbouring white communities. Even so, the rate is falling at least as rapidly as within the population at large. Complete data are not yet available but preliminary figures indicate that the improvement accelerated during the past year. It is considered that the native population is gaining at about 1.5 per year, even though up to 400 annually are lost by absorption into the general population by enfranchisement alone.

There was a period when native populations were on the decline and their future was not promising, but in the 1920's the trend changed. Whether or not this reversal can be co-related or attributed to the development of a native health service is difficult to assess. It is a fact, however, that efforts to develop a health service were sporadic up to 1927 when the present organization began to take form. Prior to that date, and from the first migration to this continent, commendable but uncoordinated efforts had been made to improve the health of the native peoples by good-hearted men and women, missionaries and the surgeons of the Imperial forces.

Administration of Indian Affairs, which had previously been a separate department, in 1936 became the Indian Affairs Branch of the Department of Mines and Resources. The Medical Branch had expanded gradually. At the same time more attention was being devoted to Eskimo welfare. There was an Eskimo Health Service in the Department of the Interior using the advice of medical officers of the Department of Pensions and National Health, as well as those of the Medical

Branch of Indian Affairs. In 1936 the administration of Eskimos also became part of the functions of the Department of Mines and Resources. Eventually, on November 1, 1945, these two native health services were taken into the Department of National Health and Welfare as Indian Health Services, so that health matters for all persons of native status are now co-ordinated by the one directorate.

### FACILITIES

Indian and Eskimo Health Services operate 20 departmental hospitals with a patient capacity of 1756 beds. In addition, there are 18 nursing stations each accommodating four patients as well as the field nurse and an assistant. These nursing station beds are for the treatment of short term disorders. Such conditions as tuberculosis or those requiring extensive treatment are passed to a hospital. There are 13 dispensaries serving as centres from which field nurses visit the surrounding native population and provide out-patient attention.

At the end of the fiscal year there were in the service 51 medical officers, five dental surgeons, 54 graduate nurses in the field and 123 graduate nurses in departmental hospitals. The total personnel was just over 1,000. During the summer months, when the greatest numbers of natives were accessible and the annual official administrative visits were made, some 15 senior medical students were recruited to assist and work under the supervision of departmental medical officers. Arrangements were made to provide extra X-ray teams at this time and contributions were made to the salaries of non-departmental medical officers and dental officers whose duties brought them into contact with native patients in the northern settlements.

### ESTABLISHMENTS

Some 291 institutional beds were added during the past fiscal year. Unfortunately, 100 beds were lost when serious damage was caused by fire in November, 1948, to the Coqualeetza Indian Hospital at Sardis, B.C. Another 18 beds would have been added had it not been for the loss also, in March, 1949, of the Hobbema Indian Hospital, which had just reached completion.

Eleven new nursing stations accommodating staff and four patients were put into operation during the year at Coppermine, Fort Good Hope, Fort McPherson and Fort Norman, all in the Northwest Territories, at Driftpile, Alta., Island Lake, Oxford House, Nelson House, and Cross Lake, all in Manitoba, and at Osnaburgh House and Lac Seul, both in Ontario. Several have been equipped with radiophones further to enhance the quality of service.

The four new nursing stations in the Mackenzie District of Northwest Territories, and particularly that at Coppermine, represent feats of no small order. Both Fort McPherson and Coppermine are well within the Arctic Circle where the building season is very short. Coppermine, on Coronation Gulf, is not infrequently inaccessible by ship for years at a time. It is now the most northerly establishment operated by Indian Health Services and even in its short history has rendered splendid service.

Twelve new dispensaries or centres for field nurses were brought into use and four residences for medical officers where accommodation could not otherwise be provided. Added facilities were thus acquired this year at Aklavik, N.W.T., Whitehorse and Carmacks, Yukon Territory, Hazelton and Alert Bay, B.C., Saddle Lake, Alta., Pine Falls and God's Lake, Man., Seven Islands, St. Regis, Mistassini, Waswanipi, Maniwan and Obedjiwan, Que., Lennox Island, P.E.I., and Fredericton, N.B.

Under construction but not completed, were a 120-bed hospital at Moose Factory, a 62-bed hospital at Sioux Lookout, nursing stations at Trout Lake and Sandy Lake in Ontario. Ontario has the largest number of Indians and the northern part was greatly in need of these additional treatment centres. The Moose Factory Hospital will serve all of James Bay and much of the whole Hudson Bay area.

## TUBERCULOSIS

The scourge causing the greatest concern to Indian Health Services and, hence, receiving the most concerted attention, is tuberculosis at all its stages. Surveys to detect active or incipient disease were in progress throughout the year. The nomadic people come together at the main settlements on certain special occasions, such as Christmas and Easter, at the termination of the main hunting seasons and generally at mid-summer. Advantage is taken of these assemblies to use portable X-ray equipment, to test for sensitivity and to give the young people who appear to have not yet been subject to the disease, inoculations of the *Bacillus Calmette-Guerin* vaccine which provides a degree of resistance to tuberculosis.

Indian Health Services has been one of the pioneers in the use of B.C.G. In a paper published during the year, Doctor A. B. Simes of Indian Health Services, with Doctor R. G. Ferguson of the Anti-Tuberculosis League in Saskatchewan, reported that, from 15 years of observations, the Indian child protected by B.C.G. had six times as favourable a chance of survival in an infective environment. The use of this procedure is being extended within the limits imposed by the instability of the vaccine and the difficulties in delivering fresh supplies to remote areas.

In the past, schools have been suspected of increasing the exposure to tuberculosis through enrollment of the occasionally unsuspected active case. Being aware of this danger, every effort has been made to have each new pupil examined, including X-rays and tests for sensitivity. So far as possible all students are examined at least once during the year. Too much praise cannot be expressed for the co-operation of school staffs and for their vigor in arranging these examinations. The general improvement in health has been widely commented upon by them.

Scores of thousands of X-ray plates were examined during the year by medical officers of the services. Something under two percent of these indicated active disease. Immediate action was taken to have the active cases admitted to a suitable institution and to keep contacts under supervision. In this connection the co-operation of the natives has been most gratifying. A recognition of the fact that every effort is being made to place the patient under the most modern active treatment impels those who were formerly reluctant or who once would have resisted admission to a hospital, to urge quick action in placing them in those hospitals which have shown the most progressive methods. In fact, there are waiting lists for these institutions. Our medical officers with long experience are most impressed by this change in attitude on the part of these people.

The increased use of streptomycin has been observed closely and as each trial has proved successful the use of the new anti-biotic has been extended. Many thousands of grams of the material were used in Indian Health Services hospitals and authorized for use on suitable cases in non-departmental institutions. The drug has gained favour in the treatment of childhood and miliary diseases and has been used increasingly for these conditions as well as in acute exudative disease and the lesions in which its efficacy had already been established. Radical surgical procedures in suitable cases are undoubtedly reducing the period of disability. The most advanced chest surgery was carried out, particularly at the Charles Camsell Indian Hospital at Edmonton, Alta.

## IMMUNIZATION

In addition to the very spectacular extension of B.C.G. vaccination, the well established inoculations against diphtheria and whooping cough, typhoid-like diseases and smallpox are given every child who can be reached by the service. Protection against the less common communicable diseases was used where there was obvious threat of spread, but not routinely. It is confidently felt that the native population is at least as well protected by these measures as any other comparable groups.

## TREATMENT ARRANGEMENTS

Over and above the facilities operated by Indian Health Services, arrangements are made for the treatment of persons of native status at several hundreds of general and special hospitals. These include the foremost teaching institutions, community hospitals and a number of mission hospitals whose clientele is almost exclusively Indian and Eskimo. Similarly, many hundreds of physicians and dentists care for the local native population, being reimbursed either by a part-time salary or fees-for-service.

In addition, and particularly for small and remote groups, minor ailments are treated by field matrons, dispensers and welfare-teachers in Indian schools. In several provinces the provincial health nursing service extends to native groups, a most happy arrangement which wipes out any feeling of distinction between racial groups. It is felt that native patients generally receive not only equal but preferential attention.

The native peoples, through Indian Health Services, have a very real and sincere appreciation of the goodwill of the many people who have aided in improving their lot. No monetary reimbursement could compensate for the unstinting efforts of these individuals, and it is not pretended that anything like commensurate reimbursement is made. In the vast majority of cases the stipend is a token only. No stipend is even offered to scores of missionaries, traders, government employees and other kind-hearted people who are giving freely of their time and skill. They are welcome collaborators in a service which has evolved through the desire and sense of moral obligation of government to improve native health. In this respect, practically no statutory obligation for medical attention exists, but increasingly large sums have been appropriated for this purpose in the trust that it has been dispensed wisely and with the ultimate promise that it will fit the native people for what must be, eventually, an equal place in the community at large.

Special mention should be made of the incalculable assistance rendered by other government services. The finest co-operation has been enjoyed in relations with all provincial medical services and with the medical facilities of the Department of National Defence. In those areas not served by commercial carriers, the Air Forces of Canada and of the United States of America have given splendid and heroic service. The communication establishments of the Defence Forces, the Department of Transport, the provincial services and private licencees have given prior attention to medical traffic and have spared neither time nor effort in our work.

What will undoubtedly prove to be one of the most outstanding advances in the history of native health was made when the Indians of British Columbia were included in the Hospital Insurance Plan which came into effect on January 1, 1949. Not only will this facilitate hospital arrangements in that province, but it is a major step in the social and economic development of these people. The Indians will, in every way, be on the same basis as all other residents and will be encouraged to contribute through Indian Health Services, reimbursing the Receiver-General on account of their premiums. The provincial authorities deserve commendation for a step which, while it undoubtedly taxed their administrative machinery, was most progressive.

## EPIDEMICS

The year 1948-49 was marked by several epidemics of moderate severity and one which took on alarming proportions. Influenza of a fairly mild type spread through the Northern parts of Ontario and Manitoba, causing much incapacity but rarely death. There were circumscribed outbreaks of Mumps about Norway House and three cases of Typhoid at Sandy Bay in Central Manitoba where this disease has lurked for many years. The usual incidence of Measles and Chickenpox was reported.

Commencing in November, 1948, beyond Churchill and spreading north along the West Coast of Hudson Bay towards the Barren Lands, a devastating epidemic of poliomyelitis occurred among a people previously most fortunately free of this disease. The new cases occurred in a fanshaped zone from the point of detected origin and presented such spectacular features that there was no difficulty in enlisting the assistance of foremost clinicians and research men.

This will be one of the most thoroughly investigated discrete incidents in the history of this disease. By the end of March, 1949, 90 cases had been identified, with 14 deaths and a number with extensive residual paralysis. A large area was quarantined and all but essential travel west from Hudson Bay to the Barren Lands is to be discouraged for many months.

An incident of this magnitude demonstrates the teamwork which should be, and has been, found within this department itself. It would seem most unlikely that any other arrangement could ensure for the people of native status such full and immediate concentration of every type of specialist and laboratory facility as was applied in this emergency.

### PUBLIC RELATIONS

A special point has been made of seeking to attract the interest in the directorate's objectives of active groups of both native and non-native races. Health has many facets, and medical treatment, without its proper relation to education, employment and home conditions, would be most inefficient. Indian Health Services medical officers and nurses infiltrate into Homemakers Clubs and other women's organizations, giving instructional chats and showing health films. Every effort is made to improve the standard of living by demonstration, example and gentle pressure.

The seemingly well, in addition to the apparently ill, were the concern of the services, from the prenatal care of the mother through the well-baby clinic to the pre-school child. The convalescing patient requires special attention and the aged present their own problems. This work was facilitated by the publication of a booklet *Good Health for Canada's Indians* which, although distributed late in the year, immediately received commendation on every hand. Four posters illustrating healthy habits were designed by the department's Information Services Division. Extensive use was made of the regional libraries of the National Film Board and in many areas suitable films were distributed on schedules.

Interest in health was stimulated among school children by competitions to design posters, and in conjunction with provincial associations, suitable awards in cash and trophies were made.

Separate mention should be made of the donation to Coqualeetza Indian Hospital by a Sorority of the Graduates of the University of British Columbia of a public address system with record player, which brought endless cheer to the patients. The directors of the sanatoria were given assistance by countless friends in arranging Christmas cheer. These tokens of good-will towards government institutions create warm feelings not only within the patients but among personnel who live and labour strenuously and often dangerously.

Indian Health Services has been host to professional meetings. Medical officers and nurses have been encouraged to attend professional meetings. They have enjoyed the respect of their confreres, and are grateful for innumerable courtesies extended to them.

The fullest measure of gratitude must go to the Superintendents of Indian Agencies. These officers of the Indian Affairs Branch of the Department of Mines and Resources are the administrators, councillors and agents of the Indians for whom the Indian Health Services directorate of the Department of National Health and Welfare has provided a family physician service. Without their whole-hearted

assistance and untiring labour a small but efficient health service would be impossible. The same applies to those officers in the Department of Mines and Resources, Northwest Territories Administration, who have charge of the Eskimo. Complete co-operation existed between the directorates of the various services.

### NORTHWEST TERRITORIES

As in the past, Indian Health Services acted as advisor on health matters for the Northwest Territories. Medical Officers in the Territories have acted as health officers within their zones, their disciplinary functions being overshadowed by the more fruitful service in advising concerning the improvement and extension of sanitary facilities for the increasing population. An extensive health survey of the Mackenzie District was made with a view to keeping this vast area medically abreast of current developments.

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## WELFARE BRANCH

Divisions of the Welfare Branch of the Department include: Family Allowances, Old Age Pensions, Physical Fitness, Voluntary War Relief and War Charities.

The Welfare Branch has been responsible for administration of the grant of \$50,000 made to the seven schools of social work to assist them in meeting the greatly increased demand for trained social workers. The money was allocated on the basis of each school's enrolment for the previous year and was divided between scholarships and administrative expenses.

In addition, the Welfare Branch has been called upon to supply Canadian representatives to various United Nations' organizations concerned with welfare. The Deputy Minister of Welfare, Dr. George F. Davidson, served as Alternate Delegate at the Seventh Session of the Economic and Social Council. Mrs. D. B. Sinclair, Executive Assistant to the Deputy Minister, is the Canadian representative on the International Children's Emergency Fund and is chairman of the Fund's programme committee.

The Welfare Branch is responsible for arranging the programmes of those who have been awarded Fellowships under the Social Welfare Advisory Services Programme of the United Nations and who wish to study and observe in Canada. During the past year there were three such Fellowship holders.

Detailed accounts of the work of the divisions of the Welfare Branch follow.

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## FAMILY ALLOWANCES

Nearly half a million more families received Family Allowances for almost one million more children in March, 1949 than when this federal plan began in July, 1945.

The Family Allowances Act became effective August, 1944. First payments of Family Allowances were made in July, 1945 to 1,237,754 families on behalf of 2,956,844 children. By March, 1949, the programme had developed to the point where 1,729,150 families received Family Allowances in respect to 3,888,653 children. These increases do not take into account the registration of children in Newfoundland for Family Allowances (about 122,000 children in 45,000 families), initial payments for whom would begin in April, 1949.

The very substantial growth in the number of families and in the number of children in Canada coming into the programme reflects, (a) a particularly high post-war birth rate, (b) increased immigration and (c) almost total registration of families in Canada for these allowances.

Highlights of the fiscal year ended March 31, 1949, with respect to Family Allowances, may be summarized as follows:

(i) Preparations in Newfoundland for Family Allowances to be paid in April, 1949;

(ii) Extension of Family Allowances welfare activities by addition of trained staff and by even greater use of provincial and local facilities, both public and private;

(iii) Receipt of useful evidence, through surveys, of the expenditures of Family Allowances by parents;

(iv) Further improvement in methods of securing necessary information of school attendance;

(v) Virtual completion of birth verification, and

(vi) Increased effort to acquaint parents and others with their rights and responsibilities with respect to Family Allowances.

## ANALYSIS OF STATISTICS

Attached to this report as appendices are a number of tables of statistics. (See pages 176 to 185 inclusive). Some of the points of interest in these tables are as follows:

### (a) *Family Allowances Payments (Table 38)*

The amount of Family Allowances payments for all the provinces of Canada for the month of March, 1949, was \$22,933,828. The total payment for the fiscal year ended March 31, 1949, was \$271,307,704. (Total for year ended March 31, 1948, was \$264,073,281).

### (b) *Number of Families and Children in Pay for Family Allowances (Tables 39 and 41)*

In March, 1949, the number of families in pay was 1,729,150 and the number of children 3,888,653. This is an increase of 59,206 families and 133,081 children over those in pay in March, 1948. It will be observed from the tables that this increase was built up gradually through the year with no spectacular increase in any one month. High birth rates and continued heavy immigration show their effects.

In regard to birth rates, it should be observed that the trend seems to have changed in the past year. The total number of births in Canada in 1948 was less, by some thousands, than in 1947, and the births in the first three months of 1949 appear to be about two per cent fewer than in the comparable months of 1948. Therefore, while the number of children receiving Family Allowances goes up month by month, the rate of increase would seem to be slowing, to some extent.

(c) *Transfers of Family Allowances Accounts Between Provinces (Table 44)*

The transfer of Family Allowances accounts from province to province would indicate that there continues to be a larger number of persons going into the province of British Columbia than are leaving it. (6,119 transfers in and 3,772 transfers out). There is, however, a slight decrease from the number transferring into that province in the fiscal year 1947-48. (8,262 transfers in, 3,144 transfers out). On the other hand both Saskatchewan and Nova Scotia show a relatively marked excess of transfers of families out of the province over transfers in. For Saskatchewan the families leaving numbered 4,917 while 2,635 transferred in; for Nova Scotia, the families leaving numbered 2,029 while 1,249 transferred in. (These figures refer only to families receiving Family Allowances payments.)

Information on transfers of families is of particular concern to many organizations and agencies in Canada. For example, the Central Mortgage and Housing Corporation receives this information from the Family Allowances Division regularly, in order to help keep it informed about critical shifts in housing needs throughout Canada.

(d) *Family Allowances and the Larger Family (Table 45)*

Examination of Table 45 will show that the trend, noted in last year's report, for the number of large families to decrease in Canada, has continued. It will be seen that, by and large, while the number of families with one to six children (under 16 years of age) continues to increase, the number of families with seven or more such children is going down. This again appears to refute the argument advanced in 1944 that Family Allowances would, among other things, increase the number of larger families. The result is evidence to the contrary.

(e) *Birth Verification (Table 46)*

The birth dates given on Family Allowances registration forms are verified by reference to provincial vital statistics records. If the birth is not registered, some other type of satisfactory evidence must be obtained. Birth verification is now largely on a current basis. Most of the 144,662 unverified births shown in Table 46 represent births occurring in the last few months, which may be called *current births* and for which vital statistic records are not yet available. The province of Quebec is exceptional because birth verification was begun there at a later date and there still remains a backlog of some 50,000 unverified births, other than current ones. This backlog is being reduced steadily. It is anticipated that verification in Quebec will be on a current basis, as it is in the other provinces, within a few months.

(f) *Overpayments*

Overpayments are created because of a number of reasons, the more typical reasons being:

- (i) Parents have not maintained the children concerned, as required;
- (ii) The child may have ceased to reside in Canada;
- (iii) The child may have been improperly absent from school;
- (iv) The child may have been working for wages;
- (v) There may have been duplicate payments because separated parents had both applied for Family Allowances. (Such duplicate payments seldom occur now because of precision of office records.)

Through the process of verification of births and cross-checking of records many overpayments come to light. Others are established as the result of information received from school authorities, the Unemployment Insurance Commission, from employers, or from other sources.

Every possible effort, by way of public information, direct correspondence, and otherwise, is made to prevent overpayments arising. Once they have occurred, equal efforts are made to reduce them. Most overpayments are recovered by deductions from continuing Family Allowances accounts or by collection from the parents. Some overpayments have finally to be considered uncollectible after all reasonable steps have been taken to recover them.

Table 48 sets out the situation as of March 31, 1949, in respect to overpayments. It will be seen that of the \$429,394.95 then outstanding, all but \$18,041.50 is recoverable. The balance is the amount, out of nearly one billion dollars paid in Family Allowances up to that time, that is known to have been improperly received by parents and which is not recoverable now.

These uncollectible amounts are in 321 accounts out of nearly two million accounts in pay. Table 49 shows overpayments as of March 31, 1949, as compared with March 31, 1948. The amount of overpayments was reduced in the year by \$63,896.05. The greatest reduction occurred in Quebec where the total of overpayments had been high compared with other provinces. This had been due to a relatively late start in Quebec on birth verification, because records were not available there as early as elsewhere. Small increases in the overpayments in the year in several other provinces reflect the more rigorous checking, now in progress, of school attendance and employment records. The situation on the whole, both with respect to the prevention of overpayments and their early detection and recovery, is distinctly encouraging.

### ADMINISTRATION

#### *(a) Preparation for Family Allowances in Newfoundland*

In anticipation of the entry of Newfoundland into Confederation, a great deal of preparatory work was carried out in 1948 and in the early months of 1949. Tentative orders for office equipment and supplies were placed in the autumn of 1948. In October, the National Director and the Regional Director for Nova Scotia visited Newfoundland and made a preliminary survey. They interviewed officials of the Departments of Public Health and Welfare, Posts and Telegraphs, Public Works, Immigration, Natural Resources and Education. All branches of government were most cooperative. Special mention should be made of the excellent assistance given by the office of the High Commissioner for Canada.

In late December, registration forms were sent out to all Newfoundland families. Along with the form went a letter explaining the purposes of Family Allowances, the conditions of eligibility, and the manner in which application should be made. By January 1, over 2,000 registration forms had been returned and by March 31 a total of 47,198 registrations had been received.

The first office quarters were in the Marshall Building, then occupied by the Canadian High Commissioner. In January the Family Allowances office was moved to Building 17, Buckmasters' Field.

A small group of experienced Family Allowances employees went to Newfoundland late in December, 1948, to set up the office there. This group was headed by Mr. P. H. Stehelin, Regional Director for Nova Scotia, and included personnel from each of the Maritime Provinces. In January the recruitment of Newfoundland personnel began and in February, Mr. J. G. Parsons was appointed as Regional Director. Mr. Parsons, a veteran of World War II, was previously employed in the Department of Education for Newfoundland. As the Newfoundland staff was enlarged and became familiar with the work, Canadian staff were able to return to their home offices. At the date of union one employee only from the Halifax office remained in Newfoundland, to give assistance during the month of April.

The preparations to pay Family Allowances in Newfoundland in the very next month after Newfoundland became a part of Canada represented a major effort. It was unique in that the addition of a new province to Canada called for intense planning and action, the results of which would culminate effectively on a fixed date, March 31, 1949. Space, equipment, supplies, personnel, represented obvious requirements. In addition, judgment, intensive work, tact and diplomacy were required. The cooperation received from the parents of Newfoundland, in prompt registration for Family Allowances, helped greatly. The registration forms submitted by parents had been carefully completed by them and were relatively easy to process. Because of the enthusiasm of the Family Allowances staff, the

cooperation of parents, and the assistance given by so many local government officials, the whole preparation for payment of Family Allowances in Newfoundland went far more smoothly than might have been anticipated. When the fiscal year ended on March 31, everything had been done to provide for payment of Family Allowances to more than 45,000 Newfoundland families in April, 1949, the first month after union.

*(b) Staff*

In addition to the staff required for the Newfoundland office, as mentioned above, five additional social workers were appointed during the year in Regional Offices across Canada. Social workers, in Family Allowances regional offices, perform invaluable work. They handle matters having to do with payments on behalf of children in institutions, deciding on eligibility of the parents concerned and following through on the required maintenance. They deal with public and private agencies in respect to children to whom such agencies are "parents" within the meaning of the Family Allowances Act. They investigate cases of alleged abuse of Family Allowances and may recommend an alternate payee, or the employment of a third party administrator. They review all cases where there is a welfare content, such as school absences where poverty is given as a reason for non-attendance, or cases where the home is broken and the parents each claim maintenance of children and hence the right to receive Family Allowances. So many and varied are the demands on the services of welfare personnel in Family Allowances office that the addition of five new professionally-trained social workers marks a very important advance in the programme.

During the year considerable attention was given to the organization of the over-all staff in the various regional offices. The Organization Branch of the Civil Service Commission completed their review of the staff requirements of the four western offices and as a result of this survey a tentative establishment of 49 persons for each office was proposed. A similar survey has recently been made for the New Brunswick and Nova Scotia offices.

*(c) Accommodation*

There was no major change in accommodation during the year. For the most part the quarters now occupied are reasonably satisfactory, with the exception of the Fredericton office and that at St. John's, Nfld. It is hoped that, if Federal Government buildings are completed in these cities, it will be possible to obtain more suitable accommodation for Family Allowances use.

*(d) Office Organization*

There has been notable progress in the standardization and refinement of office procedures following consultation between the National office and the Regional offices. This has resulted in increased efficiency. For example, one of the largest of the regional offices reports that it is now possible to deal with most cases within 48 hours, and frequently within 24 hours, after receipt of correspondence.

*(e) Conferences*

Two conferences were held in 1948-49, both at Ottawa. One conference was for the Supervisors of Welfare Services and the other for the Regional Directors of Family Allowances. These conferences provided an excellent opportunity to discuss mutual problems and out of the sessions came many worthwhile suggestions. The conferences afford a chance for a thorough review of policy. Many points cannot be covered by legislation or even through directives, and new situations occur steadily. Full discussion of these points makes for uniformity in interpretation and practice. This is most important in view of the variations to be found socially and economically in a country so huge and so diverse as Canada.

*(f) Visitors*

Several holders of Fellowships in social welfare from the United Nations visited the national office and regional offices to study the administration of the

Family Allowances Act in Canada. These included Mr. A. L. Manalang, (Philippines), Mr. Y. S. Djang (China), Dr. Behram Mehta (India). Other visitors from foreign countries included Mr. J. H. Lewis, Workmen's Compensation Commissioner, South Africa. These visits were mutually beneficial. This administration benefited from the comments which these persons were able to make as a result of their wide experience. On the other hand, they apparently found a study of Canada's programme worthwhile.

*(g) Amendments to the Family Allowances Regulations*

The Family Allowances regulations were amended by P.C. 4081, dated September 15, 1948. This Order-in-Council in effect consolidated the Regulations and also incorporated a number of minor changes. One important amendment gave the Director of Family Allowances authority to prescribe conditions for receipt and use of Family Allowances by certain types of parents, such as child-placing agencies.

*(h) British Columbia Appeal Committee*

During the year an Appeal Committee was established in British Columbia. Its function, as provided in Family Allowances legislation, is to review the facts of any case where "a person is dissatisfied with a decision as to his right to be paid an allowance or as to the amount of an allowance payable to him or as to any other matter arising under this Act." Members of the British Columbia Appeal Committee are, Mr. J. Alan Baker, Chairman, Miss Sara Spencer and Mrs. J. L. Gates.

## FACTORS AND FEATURES

The administration of Family Allowances involves far more than the routine clerical work of processing application forms, setting up files and arranging for payment of allowances, important as these are. It is necessary to see that all the conditions of eligibility are met. The child must be in proper school attendance; parents who receive the allowances must maintain the child for whom the allowances are paid; the allowances must be for the purpose intended, namely, for the welfare of the child. In carrying out this programme some of the significant aspects during the past year were as follows:

*(a) School Attendance and Employment*

According to the Family Allowances Act and Regulations a child, in order to be eligible to receive Family Allowances, must attend school in accordance with the laws of the province in which he resides. In each province, therefore, arrangements have been made with provincial school authorities to provide the Family Allowances administration with information regarding unsatisfactory school attendance. During the fiscal year 1948-49 allowances were discontinued in some 10,000 cases because of unlawful absence from school. In a great majority of cases where suspension was necessary it was possible to reinstate the allowances when the child returned to satisfactory school attendance.

Another eligibility requirement is that a child who is legally absent from school cannot work for wages and receive allowances. Arrangements have been made with the Unemployment Insurance Commission and with many employers so that regional offices are informed when a child under sixteen obtains employment. During the year, in some 24,000 cases allowances were suspended because children under 16 were working for wages. In approximately 2,000 of these cases allowances were reinstated when the children ceased to work for wages.

*(b) Payment of Family Allowances for Children in Institutions or in Paid Boarding Homes*

While the Act expressly forbids payment of allowances to institutions, allowances are paid to parents who maintain children in institutions. The "parent" may be the mother or father, relatives, foster parents, or may be a qualified child-placing agency. It has been found possible under this provision to pay allowances on behalf of the majority of children in institutions.

A child-placing agency may qualify as a "parent" for children whom it maintains not only in institutions but in paid boarding homes. However, there are certain stipulations with respect to the way in which Family Allowances may be expended by child-placing agencies. Part of the money may be used to increase the boarding home rate and the rest must be set up in a trust account and expended for items which will give additional benefits to the children concerned. In March, 1949, there were 12,850 accounts in pay to child-placing agencies. (Table 47).

*(c) The Use of Family Allowances*

Reports from research studies, Family Allowances field staff and letters from payees, school officials and welfare workers, indicate that the allowances are being used for extra benefits, such as more adequate clothing, substantial improvement in diet, extension of medical, dental and optical services, widening of educational and recreational facilities. In this connection, in February, 1949, a report was issued on a study conducted by the Economics Division, Marketing Service, Department of Agriculture and the Department of National Health and Welfare in cooperation with the Universities of Alberta and Saskatchewan. This study dealt with the distribution and use of Family Allowances payments in three areas of the Prairie Provinces in 1947.

The study covered three areas of the Prairie Provinces in which a level of living study had previously been made in 1942-43. The same areas were again covered in 1947 and the report discussed the use of Family Allowances in these areas and the degree to which changes in the level of living of these farm families could be attributed to the introduction of Family Allowances. The comparison in changes of living expenses was made under the following topics: food, clothing, medical, operational, education, recreation, personal, life insurance and special savings.

The 1947 level of living survey covered 416 homes in the three selected areas, one in Northern Saskatchewan, one in West Central Saskatchewan and one in West Central Alberta. These homes housed 1,074 dependents up to 21 years of age; 714 of these, distributed among 277 families, were receiving Family Allowances payments. Altogether the amount of Family Allowances received in 1947 was \$50,618.

In each of the three districts more families spent some Family Allowances money on clothing than on any other single item. More than three-quarters of those receiving Family Allowances stated that they had spent some of it on clothing; three-fifths mentioned food; almost one-quarter medical care; one-fifth education, and another fifth, recreation.

When asked whether they approved of the Family Allowances policy, 98 per cent of those replying gave an unequivocal "Yes". More than three-quarters of the housewives who expressed approval said that the allowances helped for general living expenses, food, clothing, and similar items. One-quarter specifically stated that the Family Allowances provided "extras" or things the family "could not otherwise have". Regularity of this cash payment was considered to be one of its main assets in relieving worry for the wife and mother. Only six families said that they disapproved of Family Allowances.

The expenditure items on which housewives said they spent the allowances directly were not always those on which their final effect was most felt, particularly in the higher income families. That is, while the Family Allowances cheque was spent, for example, on food, sometimes it merely replaced money from other sources which would ordinarily have been spent on food and released it for expenditure on some other item. Therefore, while the allowance cheque was being spent on food, its influence was being felt in another direction. This point was illustrated by one housewife who said, "Family Allowances are used for food and clothing. I am able to save more from milk cheques when the allowance pays for food and clothing."

*(d) Welfare Services*

While experience has shown that a very high percentage of parents have the interests of their child at heart and therefore do expend the allowances for the wel-

fare of the child, nevertheless, in a small number of cases there is indication of misuse of allowances and when this occurs, steps are taken to investigate the matter and, if investigation shows that the evidence warrants it, arrangements are made to pay allowances to another person or agency so that the child will receive the benefit of the allowance.

During the fiscal year there were 1,333 reported cases of misuse. In many of these, investigation showed that the allowances were being properly expended and no further action was necessary. Thus, in nearly 1,100 cases it was found unnecessary to change the payee. In the remaining cases, a new payee was found in order to ensure proper expenditure of Family Allowances for the children concerned. When it is considered that Family Allowances go out to approximately 1,730,000 families each month the number of cases of proven misuse is seen to be small.

Arrangements have been made in all provinces to have welfare investigations carried out by recognized child-placing agencies or provincial departments. For each completed investigation a fee of \$5.00 is paid. In addition, in some instances investigations are carried out by social workers employed in the Family Allowances regional offices. During the year there were 3,722 welfare investigations conducted by provincial departments of welfare, 1,529 done through other child-placing agencies and 2,151 done by Family Allowances regional staff.

The work of the Welfare Section in regional offices was by no means limited to welfare investigations regarding reported misuse. Altogether during the fiscal year there were approximately 27,000 cases referred to the Family Allowances welfare staff. Of these 12,000 were in connection with problems of determining eligibility of a parent to receive allowances on the grounds of maintenance. Nearly 9,000 cases had to do with children moving from one home to another. Other problems which were handled, in part, by Welfare personnel dealt with overpayments, adoptions and school attendance.

The Regional Director, the Supervisor of Welfare Services and other senior staff members in each province, as an important part of their work, visited hospitals, sanatoria, orphanages, residential schools, health units, municipal officials, Children's Aid Societies, etc. Through these contacts it was possible to explain to the various authorities details of the administration of Family Allowances and to obtain their cooperation.

#### *(e) Publicity*

During the year steps were taken to see that parents were informed of the provisions of the Act concerning requirements and the ways in which Family Allowances are to be used. A Family Allowances display was produced by the Information Services Division and this display was exhibited widely at fairs, conventions, in department store windows, and so forth. In addition, the Family Allowances registration form was revised to give parents additional information on their rights and responsibilities with respect to Family Allowances. Several stuffer letters went out with the cheques, pointing out such specific points as the necessity for proper school attendance. Particular effort was given to the need of keeping parents informed of the eligibility of their children for Family Allowances, insofar as it is affected by their engaging in paid employment.

#### *(f) Prosecutions*

In a few instances it was necessary to prosecute applicants for offences under the Family Allowances Act. These were cases where fraud was involved, such as false applications or acceptance of Family Allowances when the parent was no longer entitled. To date there have been 11 prosecutions, in each of which conviction was obtained. It is gratifying to note the extremely small number of cases where it has been found advisable to prosecute. At the same time it is the intention to take this action whenever the facts indicate that it is necessary.

## PAYMENT TO INDIANS AND ESKIMOS

(a) *Indians*

Family Allowances are paid to Indians either by cheque or, in the case of Indians in more remote areas, in *kind*. The Department of Mines and Resources, Indian Affairs Branch, gives valuable assistance in the payment of allowances to Indians. Particular mention should be made of the work of the Indian Superintendents who have taken on the added responsibility of administration of Family Allowances in addition to their other duties.

As of December 31, 1948, there were 19,021 families in pay, with 54,624 children. An interesting development over the past year was an increase in the number of Indians who were paid by cheque rather than in kind. Upwards of 78 per cent of Indians were paid by cheque in 1948-49. This indicated that, in the opinion of the competent authorities, an increasing number of Indian families had demonstrated their ability to expend the allowances wisely. Special publicity was prepared jointly by the Department of Mines and Resources and the Department of National Health and Welfare for distribution among the Indians; this included colourful calendars and posters.

(b) *Eskimos*

All Eskimos are paid in kind through the cooperation of the Department of Mines and Resources. The Eskimos are allowed to purchase certain articles of food and clothing under the guidance of the District Registrar, usually a member of the R.C.M.P.

In the summer of 1948 several officials of the Department of Mines and Resources visited the Eastern Arctic and reported that, generally, the allowances are of tangible benefit to the children. They mentioned particularly the fact that the Eskimos are using far more milk and pabulum. At March 31, 1949, there were 1,582 Eskimo families and 3,540 Eskimo children receiving Family Allowances.

## CO-OPERATION

Thanks are due to all those organizations, both public and private, which assisted the administration of Family Allowances so admirably in the year under review. Departments of government, both federal and provincial, school authorities, welfare agencies, employers of labour, and many others have been extremely helpful. Needless to say, the finest of co-operation has been extended by parents themselves. Their correspondence, particularly in reporting changes of address, circumstances affecting eligibility, and many other details growing out of so large a social welfare programme, has been most helpful in enabling prompt attention to be given to their Family Allowances interests.

Particular mention is made by the National Director of Family Allowances of the work done by the Chief Treasury Officer, the District Treasury Officers and their staffs. Their constant helpfulness has aided the administration of Family Allowances very greatly in making effective the broad programme which has developed under the provisions of Family Allowances legislation.

## OLD AGE PENSIONS



Considerable increases in the number of persons in receipt of pensions for the aged and for the blind, and even more striking rises in federal expenditures for such aid, have occurred in Canada in recent years, according to a review of activities of the Old Age Pensions Division of the Department.

The Government of Canada and the governments of the provinces together provide pensions for the purpose of assisting aged and blind persons. In normal

times such persons are at a disadvantage in obtaining employment. Some, of course, have income of various kinds, but in most cases the income is comparatively small. With a low cost of living those with income may be able to support themselves. When the cost of living rises many may be compelled to apply for assistance under the Old Age Pensions Act.

While World War II was in progress the number of old age pensioners actually decreased. At the end of the fiscal year 1939-40 there were 186,035 persons over the age of 70 years receiving pensions. By the end of the fiscal year 1943-44 the number had dropped to 181,384. The decrease in the number of pensioners was due partly to greater opportunities for persons of advanced years to obtain employment and partly to more jobs and higher wages for younger persons who prefer, if possible, to support their parents without assistance from governments.

Following the cessation of hostilities in 1945 the number of old age pensioners began to increase rapidly. By the end of the fiscal year 1946-47 there were 209,029 persons over the age of seventy years receiving pensions.

### LEGISLATION BROADENED

In the following fiscal year, 1947-48, Parliament made a number of important amendments to the Old Age Pensions Act. From the inception of the Act the maximum pension to which the Government of Canada would contribute its share had been \$240 a year. Supplementary agreements with the provinces made under the authority of the War Measures Act had added \$60 a year from 1943. In 1947 the maximum pension was increased to \$360 a year by an amendment to the Act and as from May 1, 1947, all provinces but one paid pensions at the higher rate. In the ninth province the increase was effective from August 1, 1947.

The 1947 amendments also increased the maximum amounts of income allowed. From 1944 the maximum income, including pension, in the case of a single person had been \$425 a year and in the case of a married person, \$850 a year. The amendments raised these amounts to \$600 a year and \$1080 a year respectively. By the end of the fiscal year 1948-49 the number of old age pensioners had risen to 251,865. This increase of almost 43,000 within two years was due mainly to the more generous provisions of the Act. In addition to raising the maximum income allowed, Parliament also deleted the requirement that an applicant be a British subject and modified certain of the residence restrictions.

### BLIND PENSIONERS

Unlike old age pensions the pensions provided under the Old Age Pensions Act for blind persons continued to increase at a moderate rate during the war years. At the end of the fiscal year 1939-40 there were 5,404 blind pensioners and at the end of the fiscal year 1944-45, there were 6,663. In 1947 the Act was amended to permit payment of pensions to blind persons who had attained the age of 21 years. Previously the age requirement had been 40 years. By March 31, 1949, the number of pensioners had risen to 9,567. This increase of nearly 50 per centum within four years was due partly to the lowering of the age requirement and partly to an increase in the amounts of maximum income allowed. In the amended Act the amounts of maximum income allowed are \$720 a year for a single blind person, \$1200 a year for a married blind person with a sighted spouse and \$1320 a year for a blind person with a blind spouse. A maximum pension of \$360 a year was paid to blind pensioners from the same dates as for old age pensioners.

### COST OF PENSIONS

While the number of pensioners, both old age and blind, has increased substantially within the last few years there has been a relatively greater increase in federal expenditure for pensions. The following figures show the amounts paid by the Government of Canada for old age and blind pensions for the fiscal years 1939-40, 1944-45 and 1948-49:—

## FEDERAL EXPENDITURE

Fiscal Year	Old Age Pensions	Blind Pensions	Total
1939-40	\$29,080,630.90	\$ 895,923.09	\$29,976,553.99
1944-45	39,503,027.55	1,471,977.97	40,975,005.52
1948-49	64,232,210.92	2,532,074.11	66,764,285.03

## ADMINISTRATION

Old age pensions and pensions for blind persons are paid in all provinces under agreements which require provincial authorities to administer pensions in accordance with the provisions of the Federal Old Age Pensions Act and Regulations. While the actual responsibility for the granting and paying of pensions rests with the provinces, all decisions involving federal funds are subject to examination and audit by federal authorities. The examination of pensioners' files is made in the provinces by members of the Old Age Pensions Division, Department of National Health and Welfare. In addition to establishing the amounts payable by Canada to the provinces the Division deals with other matters incidental to the administration of pensions and acts as pension authority for the Northwest Territories.

Tables 51, 52, 53 and 54 (pages 185 to 187) show the amounts paid by the Government of Canada to the provinces for old age pensions and pensions for blind persons for the fiscal year 1948-49 with relevant statistics as at March 31, 1949.

## PHYSICAL FITNESS



An ever-increasing demand for expanded services was evident during the year in the field in which the department's Physical Fitness Division and the National Council on Physical Fitness sought to promote health through recreation.

Progress was made towards the fitness objective, although lack of a sufficient number of trained leaders and the shortage of facilities limited the scope of these efforts and prevented thousands of people from taking advantage of the Fitness programme. With the limited funds available from the federal government, some provinces found it difficult to meet the demands made upon them, even though they were already expending several times the amount of money required under the National Physical Fitness Act.

During the past five years the provinces have expanded their programmes to include many aspects of fitness and recreation. The pattern of the programme has become more readily discernable, as each new project has been undertaken. The emphasis is on community recreation of a particularly Canadian character. The practice of co-operative construction of facilities, with labour being entirely or partially donated, has been increasing. Co-operation is the keynote in the promotion of recreation programmes in small hamlets where several share in the use of equipment and services, which are rotated from place to place.

Under the terms of the National Physical Fitness Act which was enacted by Parliament in 1943 and is administered by the department through the Physical Fitness Division, the federal government makes available to the provinces a sum not exceeding \$225,000 annually for the promotion of fitness in all its aspects. The money is divided among the provinces on a per capita basis, subject to a mutually satisfactory agreement.

Beginning in 1944, each province selected for implementation that aspect of the overall programme which appeared to be needed most urgently and for which necessary facilities, equipment and personnel were available. At the present time British Columbia, Alberta, Saskatchewan, Manitoba, New Brunswick, Prince Edward Island, Nova Scotia and the Northwest Territories are operating fitness programmes aided by financial grants from the National Physical Fitness Fund.

## PHYSICAL FITNESS DIVISION

*Administration*

While the actual carrying out of fitness and recreational projects is a provincial and community responsibility, the Physical Fitness Division acts as a clearing house among the provinces for the latest information about physical fitness, recreation, physical education, community centres, sports and allied activities. It keeps in touch with the latest developments abroad and circulates reports on them. Other divisions or departments of government working in related fields use its consultative services, as do large numbers of individuals and organizations from all parts of Canada, who request information and advice.

During July and August the Acting Director visited the four western provinces. At that time major attention was devoted to leadership training problems, summer schools being visited in each province. Several short field trips were included, to observe current developments in community recreation programmes. Attendance at national executive meetings and conferences was limited, due to lack of professional staff in the division.

Liaison with other countries, particularly with those within the British Commonwealth, was extended during the year, notably following the International Congress for Physical Education, Recreation and Rehabilitation, held in London, in July 1948, when the division was represented by Mr. Alan Chambers and by Dr. R. V. Gottlieb (attached to D.V.A., London).

The division was also represented at the following Canadian conferences: the Canadian Education Association, Canadian Association for Health, Physical Education and Recreation, the Parks and Recreation Association of Canada, the Canadian Olympic Association, the Amateur Athletic Union of Canada, and the Joint Planning Commission (Adult Education Association). A representative of the division attended the national conference of the American Association for Health, Physical Education and Recreation. In addition, the division kept in touch with other associations through personal contact or correspondence.

During the year two distinguished visitors spent considerable time in both the national office and in some of the provincial offices. Dr. Agne Holmstrom, Sweden, Secretary-General of the Organizing Committee for the *Lingiad*, 1949, endeavoured to interest Canadian groups in participation in that event, and, as a result, approximately 25 Canadians arranged to attend it as observers. No demonstration groups were undertaken, at this time. Miss Kathleen M. Gordon, Commonwealth Fitness Officer, Australia, visited several provinces on a trip across this continent, and considerable interest was shown in the research project which occasioned her tour.

*Informational Materials*

Information relevant to fitness, recreation, physical education, cultural activities, community centres, etc., and reports on new projects and research in Canada and in other lands, as well as on new procedures and developments, were issued to Council members, interested organizations and individuals, in bulletin form.

Distribution of this material was as follows:

Mimeographed, 1948-49:

(a) English.....	138 subjects, 74,700 copies
(b) French.....	52 subjects, 27,350 copies
Total.....	102,050 copies

Total number of copies distributed:

1946-47	1947-48	1948-49
25,000	92,000	102,050

Printed:	English	French
<i>Better Health Through Skiing</i> .....	4,408	3,349
<i>Daily Does It</i> .....	14,868	1,077
<i>Fit for Tomorrow</i> .....	16,073	3,780
<i>Flier for Films</i> .....	8,333	3,363
<i>Guide for Leaders in Community Recreation</i> ..	11,800	
<i>National Aquatic Standards</i> .....	5,180	1,350
<i>Annual Report</i> (reprints).....	151	mimeo.
Total number of copies distributed.....	60,813	12,919
Grand total.....	73,732	
Total number of copies distributed.....	1947-48	1948-49
	9,252	73,732
Total material distributed 1948-49.....	175,782	

### Publications

The division continued to provide numerous publications.

*Daily Does It*—14,868 copies of the English text of this pamphlet were received in July and were completely distributed by the end of February 1949. Of the French text, 5,400 copies were received in October and 1,100 copies were distributed. Reprinting of this pamphlet is contemplated.

*Guide for Leaders in Community Recreation*—Of the English text, 10,000 copies were received in November 1948 and all had been distributed by December 31. A reprint of 10,000 copies was ordered and was received in January 1949. The French version is in press.

*National Aquatic Standards*—A total of 5,000 English copies and 2,170 French copies was received in July. A reprint of 7,620 English and 3,380 French printings was received in January 1949.

*Fitness Through Recreation*—This leaflet is intended to provide information concerning the three films produced by the National Council on Physical Fitness and the Physical Fitness Division. A total of 45,000 copies of the English text and 13,500 copies of the French version were received in February 1949.

*Wetzel Grid*—Both the English and French texts of the pamphlet on the Wetzel Grid were completed this year and are in press.

*Fitness Through Recreation (Film Kit)*—This kit of materials was prepared to assist discussion groups utilizing the three films on community recreation produced by the Physical Fitness Division and the National Council on Physical Fitness. To date, 1,863 English kits and 232 French kits, as well as 88 bilingual kits, have been distributed.

Work is progressing on the texts of new pamphlets entitled *Rural Recreation* and *Play for Pre-schoolers* and on a brochure on *The Physical Fitness Programme*. The final titles of these publications may be changed before going to press. It is expected that they will be available for distribution late in 1949.

### Reports prepared on request, 1948-49:

1. Memorandum re Health Services in Canadian Universities—prepared at the request of the Australian Government—completed November 1948.
2. First National Conference of Sports Governing Bodies—prepared at the request of the National Council on Physical Fitness—completed January 1949.
3. Sports and Athletics in Other Countries (Part I)—prepared at the request of the National Council on Physical Fitness—completed March 1949.
4. Report on Physical Education and Recreation in Penal Institutions—prepared at the request of the National Council on Physical Fitness—final report completed March 1949.

5. Report on Physical Education and Recreation in Mental Institutions—prepared at the request of the National Council on Physical Fitness—final report completed March 1949.
6. Methods of Promoting Cultural Recreation in the Provinces—prepared at the request of the National Council on Physical Fitness—completed March 1949.
7. Provincial Relationships with National Agencies—prepared at the request of the National Council on Physical Fitness—completed March 1949.
8. Services Available in Provincial Offices—prepared at the request of the National Council on Physical Fitness—completed January 1949.
9. The Lingiad, Stockholm 1949—finalized December 1948.
10. Programme Aids Available in Provincial Fitness Offices—prepared at the request of the National Council on Physical Fitness—completed March 1949.

#### *Bulletins and Precis*

These mimeographed materials are prepared and distributed by the national and the provincial offices periodically throughout the year. French language copies are made on request. These materials cover a wide variety of subjects.

#### *Displays and Exhibits*

The division is now in possession of five different displays which have been shown at various meetings and conventions of national organizations and are available on demand for use in the provinces.

The first of these was used at the national convention of the Canadian Association for Health, Physical Education and Recreation in Montreal in April, 1948, and from there it was transferred to the national convention of the American Association at Kansas City later in the same month. It has since been used at other conventions and meetings.

A special exhibit entitled *Fitness through Recreation in Canada* was prepared by the Exhibition Commission for display at the International Congress on Physical Education, Recreation and Rehabilitation held in London in July 1948. This display was most favourably commented on, and reports indicate that, next to the United Kingdom display, it was the outstanding exhibit at the Congress. It was retained in Great Britain and will be used at the International Congress of Physical Education for Girls and Women in Copenhagen in July 1949, and at the Lingiad-1949, in Stockholm in July and August.

A small window display has proved useful in the provinces. A small revolving display for use at smaller conventions is now available and has already been used for meetings in Ottawa. In connection with the 1949 Dominion Drama Festival, a special exhibit, including a small model stage and two panels displaying programme aids, was prepared by the National Film Board.

#### *Press and Radio*

Information on specific aspects of the fitness and recreational programme in Canada was released to daily and weekly newspapers and to magazines from time to time. Background material was provided on request for journalists and radio commentators, and information on sundry aspects of fitness and recreation was disseminated through the department's Information Services Division to radio stations and newspapers.

The department has sponsored a series of radio broadcasts *Here's Health*. These discs are available to the private broadcasting stations. One of the series has been devoted to community recreation.

#### *Preview Film Library*

During the year 37 new titles were added to the library, bringing the total to 106 films (Physical Recreation 85, Camping and Hostelling 2, Arts and Crafts 11, Music 1, Children's Films 2, Community Organization for Recreation 5). During

the past two years, 600 films have been appraised by representative national evaluation committees. It is estimated that approximately 200 films have still to be screened.

With the co-operation and assistance of the National Film Board and the Australian, Belgian, Danish, French and Swedish Legations, one block of films from other countries was circulated on the primary circuit.

On completion of the primary circuit, which provides screenings in two centres in each province for representative provincial screening committees, the films are deposited with the National Film Society for rental at a nominal service charge.

#### *Co-operation with Joint Planning Commission*

The division has co-operated with the Joint Planning Commission by making the detailed appraisals prepared by the division's national evaluation committees available to the Commission for use in preparing film reports for the Canadian Association for Adult Education. Informational materials prepared as discussion aids by the division have also been made available to the Canadian Association for Adult Education for use in their programme.

#### *Appraisal Form for Evaluation*

During the past two years, the national evaluation committees have amended and revised the original form, from time to time. The present form, which has been used for some months, appears to be adequate and comprehensive.

## NATIONAL COUNCIL ON PHYSICAL FITNESS

The National Council on Physical Fitness is an advisory body appointed by the Governor General in Council, which meets twice each year to discuss the over-all programme and to advise the Minister of National Health and Welfare on various aspects of this field. In some provinces, provincial fitness councils function on lines comparable to the national council.

Regular meetings of the Council were convened in Montreal on April 10-13, 1948, and in Ottawa on September 22-24, 1948. A special meeting was called in January 1949 to deal with proposals for amendments to the Physical Fitness Act.

#### *Members of the National Council on Physical Fitness*

	Appointment expires
J. H. Ross, B.Sc., Acting Chairman.	
M. H. Brewer, B.A., Department of Education, Fredericton, N.B.	Dec. 31, 1949
H. M. Devenney, M.A., Director of Physical Fitness, Dept. of Health and Public Welfare, Winnipeg, Man.	Dec. 31, 1949
*C. E. Hendry, M.A., Professor, School of Social Work, University of Toronto, Toronto, Ont.	Aug. 31, 1950
J. B. Kirkpatrick, Ed.D., Director of Physical Education, McGill University, Montreal, Que.	Dec. 31, 1950
**E. Lee, B.A., Director of Physical Education and Recreation, Department of Education, Vancouver, B.C.	Dec. 31, 1951
J. H. Ross, B.Sc., Director of Health and Recreation, Department of Education, Calgary, Alta.	Dec. 31, 1951
W. C. Ross, B.A., D.D., Director of Physical Fitness, Department of Public Health, Halifax, N.S.	Dec. 31, 1951
L. W. Shaw, M.A., Deputy Minister and Director of Education, Department of Education, Charlottetown, P.E.I.	Dec. 31, 1949
E. W. Stinson, B.A., Director of Physical Fitness, Saskatchewan Recreation Movement, Dept. of Public Health, Regina, Sask.	Aug. 31, 1951

\*Mr. C. E. Hendry resigned April 1, 1949

\*\*Mr. E. Lee subsequently appointed National Director of Physical Fitness and Chairman of the Council.

*Standing Committees—N.C.P.F., 1948-49*

Community Organization . . .	E. Lee, B.A., H. R. Lamberton, M.A., B.Ed.
Leadership . . . . .	W. C. Ross, B.A., D.D.; J. W. McKinnon, B.A., B.Paed.
Policy . . . . .	J. H. Ross, B.Sc., and all members of N.C.P.F.
Programme . . . . .	H. M. Devenney, M.A.; M. H. Brewer, B.A.; E. W. Stinson, B.A.
Publications . . . . .	C. E. Hendry, M.A.
Research . . . . .	J. B. Kirkpatrick, Ed.D.; L. W. Shaw, M.A., LL.D.
Resolutions . . . . .	H. M. Devenney, M.A.; W. G. Ross, B.A., D.D.; J. H. Ross, B.Sc.

*Special Committees—N.C.P.F., 1948-49*

Job Analysis . . . . .	E. Lee, B.A.
Amateurism . . . . .	J. H. Ross, B.Sc.
Competition . . . . .	H. M. Devenney, M.A.
Awards . . . . .	W. C. Ross, B.A., D.D.

Note:—(1) In each case, the first named is the chairman.

- (2) Mr. J. W. McKinnon and Mr. H. R. Lamberton, who represent the Northwest Territories, were included in N.C.P.F. committees at the invitation of the Council.

*National Council Activities*

In carrying out its duties under section 4 (1) (b) of the Act, the National Council on Physical Fitness has been active in its capacity as a co-ordinating body. Outstanding achievement in this field is noted below.

*Co-operation with the Canadian Association for Health, Physical Education and Recreation*

In April 1948, the N.C.P.F. scheduled its spring meeting in Montreal in order to share part of its programme with the Canadian Association for Health, Physical Education and Recreation. Dr. N. C. Wetzel and Professor R. Grueninger, guests of the N.C.P.F., delivered addresses to the combined group and participated in research discussions carried on by the Council. Dr. N. C. Wetzel, Consultant in Pediatrics, U.S.A., has conducted extensive research on the growth of children and has investigated causes of growth failure. Professor R. Grueninger, Department of Physical Education, Western Reserve University, U.S.A., has carried out extensive experimental work in relation to the use of the Wetzel Grid in the physical education programme.

The success of the joint meeting was apparent. The increased co-operation of members of the C.A.H.P.E.R. has indicated the value of the policy of holding joint meetings from time to time and also the need for such meetings in improving liaison with professional groups.

*First National Conference of Sports Governing Bodies*

On the advice of the N.C.P.F., the Minister called a meeting of representatives of all the sports governing bodies in Canada. The purpose of the meeting was to provide an opportunity for the sports governing bodies to discuss the various problems connected with sports which were of mutual concern, to consider the solution of any difficulties which might exist, and to promote a greater participation in sports, thus increasing the fitness and pleasure of Canada's people.

The meeting proved most successful. Three continuing committees were set up to obtain further information on each of three problems. Nine recommendations were made in the form of resolutions. The delegates took these back to their own associations for consideration. The decisions made by association executives gave a large majority in favour of each of the resolutions formulated at the conference.

*International Congress on Physical Education, Recreation and Rehabilitation, London, England, July 1948*

The International Congress was accompanied by special Commonwealth sessions convened jointly by the British Medical Association and the Ministry of Education prior to and following the international meetings. The N.C.P.F. and the division were represented by Mr. Alan Chambers and Dr. R. V. Gottlieb, D.V.A. Staff, London, England. Reports of the conference were circulated at a later date. The main recommendation growing out of the conference was to the effect that each country in the Commonwealth family of nations and each colony set up similar boards and that the boards so formed should co-operate in carrying out research and in circulating available information to each other.

*Leadership Training*

Leadership training is still a major problem. It is becoming increasingly apparent that lay leadership should receive more extensive training. Volunteers who lead in one activity as a hobby, bring to the group an enthusiasm and refreshment which is infrequently obtained from other types of leadership. It is, therefore, a matter of major importance that adequate courses be provided for these volunteers. Experience has shown that resident courses of at least four weeks duration produce the most satisfactory results.

Each of the participating provinces makes provision for a variety of types of leadership training. Lack of sufficient funds and adequate staff have limited their efforts to expand and extend leadership training opportunities.

The Physical Fitness Division, in co-operation with the Fitness office in Prince Edward Island, made a course in drama available to selected students. The success of this undertaking and the impetus given to recreational drama activities in the communities, indicate the suitability of extending this service.

*Fitness Scholarships*

The Council considered that the provision of volunteer leadership and the provision of professional training on the undergraduate level in the fields of recreation and physical education were provincial responsibilities. They felt, however, that the matter of post-graduate training at the Master's or the Doctor's level, which was essential for university faculty appointees, for provincial supervisory and consultative staffs, and for key personnel in these specialized fields, should be subsidized by the federal government. Such training was not available in Canada. The field to be served presented so many aspects that the provision of a variety of post-graduate courses in this field at Canadian universities did not appear probable at this time.

Accordingly, as a further step in the implementation of its policy on leadership training, the National Council on Physical Fitness in September 1947 recommended to the Minister a policy of providing for scholarships at the post-graduate level to enable a selected group of promising people to undertake post-graduate study in the field of Recreation and Physical Education. On receiving Ministerial approval, authority was obtained from Treasury Board to expend \$4,000.00 on this project during the year 1949-50.

At its ninth meeting in April 1948, the Council gave further consideration to this matter and by resolution laid down the policy to be followed. "That scholarships be made available to such persons in varying amounts, up to a maximum of one thousand dollars, the amount of each to be determined by the Council in relation to the following considerations:

(a) *General Policy*

- (i) "That due account be taken of the needs of all the provinces and territories for trained personnel in the fields of physical fitness and recreation;

- (ii) "that suitability of the proposed study be evaluated in terms of its contribution to the professional competence of the applicant for the work in which he is employed;
  - (iii) "that amount of necessary expenses incurred in the pursuit of his study be estimated carefully; (The scholarship should be sufficiently large to accomplish its enabling purpose);
  - (iv) "that the leadership training committee be requested to prepare appropriate application forms which will give all the information required with respect to each candidate.
- (b) *"Qualifications of applicants*

- (i) "That the maturity of the individual be considered in terms of professional experience that would assure him getting the maximum value from the proposed study, and
- (ii) "that he or she possess personal qualities of initiative, leadership, and integrity of character."

The Council drew attention to the fact that the matter was urgent and requested that consideration be given to the provision of a specific sum, on an annual basis, for the purpose.

#### *Briefs submitted during 1948-49*

The Council received briefs during the course of the year from the under-mentioned individuals and organizations and gave them consideration:

1. *Canadian Arts Council*: presentation made by Mr. Herman Voaden, Past President, with regard to representation of the Arts Council on the National Council on Physical Fitness, the expansion of the services of the Physical Fitness Division in the arts and the provision of financial assistance (1948).

2. *William R. Cook*; presentation made on his own behalf with regard to the possible organization of Travelling Arts and Crafts Exhibits. (1948).

3. *Parks and Recreation Association of Canada*; presentation made by Mr. Oscar L. Pearson, Executive Member, with regard to the provision of financial assistance, the representation of the Association on the Council, the provision of certain extended professional services and the production of a film dealing with public recreation (1949).

4. *Western Ontario Secondary Schools' Association*; presentation made by Mr. C. V. Box, Executive Secretary, with regard to the measures available for the protection of school athletes against exploitation (1948).

#### *Recommendations of the National Council on Physical Fitness*

*Facilities*; the need for recreational facilities is immediate and urgent. Provision of facilities has been withheld for many years . . . first by the depression, then by the war, and more recently by reconstruction needs.

Various associations and groups, when presenting briefs to the National Council on Physical Fitness, have emphasized the need for immediate assistance in the matter of procuring facilities.

The National Council on Physical Fitness at its eleventh meeting held in Ottawa on January 6-9, 1949, passed the following resolution:—

"Whereas a recent survey of the needs of sports, conducted by the Chairman of the National Council on Physical Fitness, indicates that the most urgent need is for increased sports facilities; and whereas participation in sports activities makes a major and essential contribution to the health of the people of Canada; therefore be it resolved that this Council request the Minister to give early consideration to the appropriation of funds to assist in this purpose."

## PROVINCIAL FITNESS PROGRAMMES

During the fiscal year 1948-49, seven provinces and the Northwest Territories were operating fitness programmes aided by financial grants from the National Physical Fitness Fund. These programmes are operated in accordance with the individual plan of the province concerned. During the year agreements were renewed by Prince Edward Island, Nova Scotia, Manitoba and British Columbia.

As citizens see and accept their social responsibilities, the general attitude towards the fitness programme becomes increasingly favourable. It is taking time for people to appreciate the place which recreation has in the daily life of the individual, to realize that recreation is more than playgrounds for children, or sports for youth; that it is, in fact, a way of life.

There is a growing appreciation of the vital contribution inherent in community recreation programmes to mold a strong social force for the preservation of democracy through development of the individuals' creative talents.

Present trends indicate considerable expansion in the immediate future to care for the recreational needs of older adults—to enable them to enjoy a creative old age. Thus recreation, creatively conceived and ably promoted, can make a vital contribution to the positive health of the people of Canada by putting "more years in each life, and more life in each year."

NOTE: See statement of *Amounts Available for and Paid to the Provinces under the National Physical Fitness Act*, Table 55, page 187, and statement of *Assistance to Provinces and Provincial Expenditures under the National Physical Fitness Act*, Table 56, page 188.

## VOLUNTARY WAR RELIEF DIVISION

The Voluntary War Relief Division was created in May, 1944, for the purpose of co-ordinating the activities of all overseas relief societies in accordance with government policy and the supply situation. On February 1, 1947, the division was transferred from the Department of National War Services to this Department, the continued volume of voluntary overseas relief and the necessity for export control making it advisable to maintain this wartime service after the Department of National War Services ceased to exist.

The division continued to act as liaison between the various relief organizations and the government departments and agencies concerned in securing approval of the export of goods and the transferring of cash for relief purposes. The total of goods shipped and cash transferred during the past year amounted to \$13,214,021, more than \$6,000,000 of which went to Palestine. Shipments to all areas except Palestine declined considerably during the year. Relief sent was as follows:

New and used wearing apparel.....	\$5,597,558
Foodstuffs.....	\$4,383,043
Drugs and hospital supplies.....	\$ 974,980
Miscellaneous goods.....	\$1,284,764
Cash transferred.....	\$ 973,676
Total.....	\$13,214,021

In compiling these figures all used wearing apparel was valued at \$1 per pound and miscellaneous collections of foods at 25¢ per pound.

Because of improved supply conditions, export control was removed during the year on a great many items which had formerly been under an export quota system and, by March 31, 1949, only a few items of foodstuffs were still under a relief export quota. In view of this, and because of the gradual reduction in the

volume of overseas relief, it was decided to discontinue the division, after March 31. It was felt that the work which remained to be done could be carried on by the departments concerned, i.e. Wartime Prices and Trade Board, Trade and Commerce, Foreign Exchange Control Board and Canadian Wheat Board.

The records of the division show that, from September 1939 until March 31, 1949, relief shipments totalled approximately \$113,000,000, distributed as follows:

New and used wearing apparel . . . . .	\$51,378,208
Foodstuffs . . . . .	\$14,432,934
Drugs and hospital supplies . . . . .	\$24,434,997
Miscellaneous goods . . . . .	\$5,845,284
Cash transferred . . . . .	\$16,932,660
Total . . . . .	<u>\$113,024,083</u>

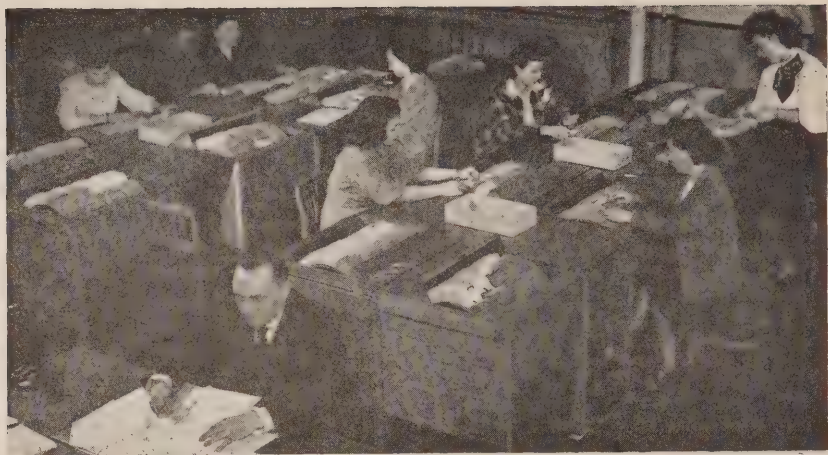
## WAR CHARITIES DIVISION

During the fiscal year the War Charities Division continued to administer the War Charities Act, which originally provided that no person or group might, directly or indirectly, solicit or make an appeal to the public for donations or subscriptions, in money or in kind, for any War Charity Fund, unless registered under the Act.

An Act to amend the War Charities Act, 1939 (assented to June 27, 1947), limited its provisions to War Charity Funds which were already registered under the Act. Consequently, following the passage of the amending Bill, the division's responsibility for dealing with applications for registration ceased and attention was directed to the proper termination of registrations still in effect. Such registrations were continued for the number of months necessary to wind up the activities of the Fund and to permit the preparation of a satisfactory final audited statement.

In the case of Funds unable to comply with the formalities required to cancel registration immediately, registration was renewed for a limited period. A declaration is also required as to the purpose for which any balance of funds on hand will be utilized. On receipt of the final audited statement and the declaration, registration under the War Charities Act is terminated and this fact is published in the *Canada Gazette*. After termination of registration, any further fund-raising activities are not subject to the Act, but continue to be subject to any other laws which may be applicable to them.

After March 31, 1949, there remained only 56 Funds registered under the War Charities Act, of which 39 were branches of main Funds, and it was decided to close the division as such. The remaining duties were transferred to the Welfare Branch administration.



## ADMINISTRATION BRANCH

Administrative services of the Department worked under increasing pressure this year with the broadening of the federal contribution to public health and with the further application of measures to ensure the welfare of Canadians.

Following are reports of activities of the Administration Branch, which comprises Departmental Secretary's Division, Information Services, Legal, Library, Personnel, Purchasing and Supply and Research Divisions.

### DEPARTMENTAL SECRETARY'S DIVISION



With all sections reporting substantially increased call on their services, the Departmental Secretary's Division felt the effect of general expansion during the past year in all the department's activities. The Departmental Secretary was responsible to the Deputy Ministers for administration of the Accounts Section, Central Registry (including mail, messenger and truck service), Correspondence Section, the Departmental Stenographic and Typing Pool, and the Duplicating Section.

Among the Departmental Secretary's duties were also those of participating in discussions with Treasury Board on Departmental Estimates, assisting the Minister and the Deputy Ministers on the floor of the House of Commons during debates on the Estimates, and preparing Parliamentary Answers, Returns to Orders for Return and other material for tabling in Parliament.

The division collated and distributed daily to senior officials concerned compilations of references in Parliament to matters of interest to this department, and maintained detailed subject indexes on such matters. It also approved submissions to Privy Council and Treasury Board, with respect to their financial implications, routed submissions to Council and Treasury Board and distributed, recorded, gazetted and arranged for the printing and/or tabling of Orders-in-Council and Treasury Board minutes.

Numerous other demands were made upon the Division as indicated in a brief review of activities of its sections.

*Accounts and Estimates Section*

The heavy volume of work related to preparation of Main Estimates, Supplementary Estimates and Further Supplementary Estimates and to compiling the Estimates Book, fell largely on this section. Accounts payable by the department were pre-audited before approval by the Departmental Secretary on the Deputy Ministers' behalf; more than 1,500 letters or memoranda were drafted dealing with accounts and other financial matters and submissions to Council and to Treasury Board dealing exclusively with financial matters were prepared.

Last summer the Departmental Accountant participated in a five-week survey designed to determine the status of medical research in Canada at that time.

*Correspondence Section*

During the year 33,500 items of incoming mail were handled, covering a wide range of subjects. The increase over last year represented mainly correspondence with respect to the Health Grants programme and to requests for financial aid for cripples. This section also assisted a number of divisions in the preparation or revision of various manuals and in the drafting of intra-departmental memoranda, directives, etc.

*Central Registry*

In addition to a marked increase in the routine activities of this section, special projects undertaken this year included, the creation of an X-ray film file series to accommodate more than 9,000 X-ray plates of the Immigration Medical Service; establishment or reorganization of various file series to handle new or expanding records in relation to such matters as health grants, parliamentary enquiries and procedure, funds and campaigns, family economics and V.D. case reports. Surveying and creating more appropriate file series to handle the records of the Mental Health and Industrial Health divisions.

At the request of the National Director of Family Allowances the Chief Records Officer visited the Toronto Family Allowances office to advise on and to assist in reorganization of the policy and administration file series and procedure there.

Towards the end of the year a new sub-registry was established in the Health Insurance Studies directorate to ensure rapid and efficient handling of its growing volume of health grant files and correspondence.

The marked increase in the routine functions of the Central Registry is indicated by the fact that it dealt with more than 600,000 pieces of ordinary and registered incoming mail and handled the despatch of approximately 2,500,000 pieces of ordinary and registered mail and publications.

*Duplicating Section*

There was a corresponding increase in the volume handled by this section, which is responsible for all duplicating work of the Department. An important duty also was the maintenance of addressograph lists embracing more than 120,000 names. Hundreds of corrections, deletions and additions were necessary each week to keep these lists up-to-date.

*Stenographic and Typing Pool*

The high percentage of French work and the acquisition of new duplicating equipment presented problems in training and complicated techniques and procedures for the Stenographic and Typing Pool. In spite of these handicaps there was an over-all increase in the work turned out and every division of the department was given typing or stenographic assistance.

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## INFORMATION SERVICES



Increase in all the department's activities, the National Health Programme and the impending entry of Newfoundland into Confederation made extraordinary demands upon the Information Services Division.

Translating the terms of the health programme into language for the layman and step-by-step reporting of application of the grants to provincial projects, were major divisional responsibilities. Another was an information campaign on Vitamin D in collaboration with the Nutrition Division.

At the same time the division went ahead with many new projects, utilizing all informational media and achieving closer liaison and co-ordination with provincial health educators and others in related work in the twin fields of health and welfare.

The Third Annual Health Education Conference held at Ottawa on March 2, 3, 4 and 5, under auspices of the division, was even more fruitful than the two previous Dominion-Provincial meetings of specialists in this field. Highlight of the conference was an "Open House" when key officials of federal and provincial services and representatives of voluntary groups and of the press were given an insight into the department's informational activities and methods. A dinner for delegates, under the chairmanship of Hon. Paul Martin, was addressed by G. H. Richardson, Deputy Secretary of the Bank of Canada, on "Networks of Understanding".

There was a stepping-up in production of all forms of material in order to comply with the spirit as well as the letter of the division's terms of reference as laid down in the Department of National Health and Welfare Act: "... publication and distribution of information relating to the public health, improved sanitation and social and industrial conditions affecting the health and lives of the people."

The division went further with the two-fold aim of (i) keeping the public adequately informed regarding the general policy of the Department, particularly its statutory functions, and explaining the various orders and regulations in terms readily understood by the ordinary citizen and through the media of publicity which will reach everyone, and (ii) co-operation with provincial departments in the field of public health education, through the production on a mass-media level of such health information tools as books, pamphlets, posters, displays, exhibits, radio material, films and filmstrips.

An office manager was appointed to supervise the growing volume of documentation, accounting, recording and other routine, permitting the director and editors to devote more time to creative work and to developing new projects. All these efforts were aimed at interpreting scientific information for the man-in-the-street, to foster the widest possible understanding and use of facilities established to raise health and welfare standards.

## PRESS

Relationships with the Press Gallery and the working press in Ottawa were exceptionally good. Hundreds of calls were made upon the director and editors, particularly following introduction of the National Health Programme and in ensuing months when explanation and clarification became necessary as provinces filed applications for federal grants and the department, through the Minister, announced approval of new projects.

The volume of general and specific press releases was very large and the division was deluged with enquiries for supplementary information and for amplification of policy.

In addition to material provided to The Canadian Press, The British United Press, to other news services, to members of the Parliamentary Press Gallery and

to special writers, the Division editors wrote numerous articles requested by important publications and organizations and drafted material to meet demands from abroad on the extent of, and results expected from, the new health plan.

As entry into the union of Newfoundland approached, special stories on services to be provided by the Department to the new province were issued. Newfoundland newspapers were provided with factual material and the division prepared advertising copy for government advertisements.

Press conferences were arranged on the outbreak of epidemics in northern areas. Official information was issued on measures taken to check these outbreaks and representatives of the press were invited to discuss the situations with departmental officials.

Newspaper and magazine writers were kept abreast of developments in both the health and welfare fields and were given access to all available information, often being assisted by material specially prepared for them. An unusually large number of feature articles was written for publication as departmental reports or in the name of senior officials of the department. Arrangements were made with several widely-read publications for picture stories dealing with health and welfare services.

Several additional weekly newspapers applied for proof sheets of the column *Canada's Health*. More than 400 publications, English and French, now use this material. Health facts provided to daily newspapers in mimeographed form as *press fillers* also found wide acceptance. Clipping surveys showed these items were often picked up by magazines and house organs. All this material resulted in a flood of applications to provincial health authorities or to the department for publications mentioned.

Under title *Here's Health*, regular release of a series of cartoons and verse, giving simple health conservation advice, was begun in October. On request, monthly sets of "mats" and proofs were supplied to nearly 100 weekly papers. These "comics" gained immediate popularity, applications for them being received from daily newspapers and from publications outside Canada.

### RADIO

An increased amount of radio time was secured and new ways were found of telling the department's story on the air. Hon. Paul Martin broadcast frequently, going on the air over national and international hook-ups as well as regularly on a local station. The minister was featured on a *Radio Farm Forum* programme with a wide listening audience. Local radio talks under the title *Report from Parliament Hill*, in which the minister explained all the department's services, were mimeographed and bound, and these informal reports provide excellent reference material.

With the licensing of new outlets, a number of additional radio stations requested the *National Health Radio Notes* service—the daily "spots" which the division has issued for the past ten years and which were the first of such public service broadcasts. Radio stations in Newfoundland applied for this material.

This year the division experimented with radio plays, first with amateurs, later employing professionals both for preparation and presentation. Twelve scripts were put on discs and six of these were distributed to 20 outlets of the Canadian Association of Broadcasters, which assisted in launching this service. These are ten-minute health dramas which it is planned to make available to all stations interested, for weekly broadcast commencing during the summer of 1949, under the department's increasingly-recognized slogan *Here's Health*.

A special disc was made by the division explaining *Ten Ways to Make the Radio Talk for You*, and it created much interest when played at the Annual Health Education Conference.

Supplementary material for the use of radio commentators and station announcers was prepared during the year, this copy being used particularly by those presenting programmes for women.

## PERIODICALS

Material contributed by leaders in health and welfare fields was published during the year in the division's periodicals. In addition to the issue monthly of *Canada's Health and Welfare*, which maintained a combined English and French circulation of more than 80,000, bright and informative supplements were published dealing with *Mental Health*, *Family Allowance*, *Old Age Pensions*, *Nutrition*, the new *National Health Programme* and *Schools of Social Work*.

The departmental magazine serves as a medium for the exchange of health and welfare information between federal, provincial and municipal departments and the voluntary and independent health and social welfare organizations. There is abundant evidence that it is making a worthwhile contribution to co-operative effort by all these agencies.

Succeeding issues presented valuable reports and a wealth of original photography and art. Focusing attention on vital problems, the supplements were particularly in demand and it was necessary to order hundreds of thousands of reprints to supply provincial departments, educational and other organizations making wide use of them. At the same time the mailing list for the periodical was constantly reviewed in order to make the magazine available to all doctors, dentists, public health workers, social service and welfare people, nurses, legislators, teachers, municipal officials, the clergy, trade unionists, service clubs, libraries, the press and radio and to others interested in Canada's progress.

Other periodicals edited by the division included the *Industrial Health Bulletin*, issued monthly by the Industrial Health Division to a selected list of 35,000 addressees with the aim of keeping management and labour advised of developments in the industrial hygiene field, and the *Canadian Nutrition Notes*, monthly letter from the Nutrition Division to more than 8,000 specialists interested in better health through nutrition. Typographical improvements were made in both these periodicals this year.

The division undertook production of the *Industrial Health Review*, a technical presentation of its field by the Industrial Health Division. The first issue was printed this year and it will appear each May and November in future.

With growing liaison between federal and provincial authorities in the field of health information, the division prepared the first of a series of mimeographed news letters *For Your Information*, containing items of interest to all engaged in presenting health and welfare facts to the public.

## PUBLICATIONS

While revising and reprinting its large stock of publications, the division produced several new works this year.

A four-page insert explaining significance of the National Health Programme was printed for distribution with *Canada's Health and Welfare Programme*, produced last year to explain the respective roles of federal, provincial and voluntary agencies and broadly to outline the health and welfare picture in Canada. Further to describe the history-making federal plan, the division printed large quantities, in both English and French, of an address by Hon. Paul Martin entitled *The Doctor and Canada's Health Programme*, which dealt in detail with the nation's new attack on disease.

Replacing outdated publications, the division issued an attractive 12-page book entitled *Rural Waters*, prepared for the Public Health Engineering Division, containing detailed instructions on home treatment of water as well as a simple plan for a water filter. At the request of the Quarantine, Immigration Medical and Sick Mariners' Services, a folder entitled *Health Care in Canada* was issued to inform immigrants of health facilities here. Another in a series of booklets prepared by the Blindness Control Division was published under title *Into the Shadows*, dealing with causes, prevention and treatment of blindness.

Additional folders were produced in the Child Training series in collaboration with the Mental Health and Child and Maternal Health divisions. These include, *Sex, Temper, Fear, Nervous Habits, Lying and Stealing and Thumb Sucking*. Progress was made in preparation of a book *Up the Years—from One to Six*, to be complementary to the *Canadian Mother and Child*, and dealing with various aspects of child upbringing. It is hoped to publish the new book during the ensuing year and also to complete a book for the Mental Health Division entitled *The Backward Child*, dealing with home care and training of the mentally-retarded child.

Numbers of leaflets issued included *Whooping Cough is a Baby Killer!*, *Make Every Day Vitamin D Day*, *For Smiles that Last* and *A Visit to the Dentist with the Robertson Family*—the last two concerning dental health; also, *Vitamin D—the Problem* and *Report to the People of the Foothills Health District*. The “pin-up” card *Daily Diet for Mothers* was revised and reprinted and preparation of leaflets to be entitled *Meals for One or Two* and *Tips to Teen agers* was commenced for the Nutrition Division. Editorial work was done for the Physical Fitness Division on a proposed book on *Rural Recreation*.

Considerable work was required this year of the bilingual editor on adaptation of publications, this involving entirely new presentation as distinct from translation. Text was so prepared for the Family Allowances book *You and Your Family*, another forthcoming publication *Up the Years—from One to Six*, a brochure on the *Wetzel Grid*, the new folders in the Child Training Series and *Good Red Blood*, while the French edition of *Canadian Mother and Child* was thoroughly revised.

The division also edited the department's *Annual Report* and arranged reprints of sections for the Civil Service Health and Physical Fitness divisions.

An ambitious printing project completed was *Pure Food Safe Drugs*, a copiously-illustrated book describing services ensuring purity and safety of consumables. Reprints of this book are being obtained to meet exceptional demands anticipated in connection with the observance in 1949-50 of the 75th anniversary of the passage of Canada's Food and Drug Act—first legislation of its kind in the Western Hemisphere.

Two mimeographed catalogues in attractive bindings were produced to describe the division's productions. An annotated list of printed material was entitled *Words to the Wise* and *Let's See* listed films and filmstrips sponsored by the Department.

Indicating that the division's productions are finding favour with educational as well as public health people, some of its publications have been made required reading by several universities, colleges and high schools. Publications and posters produced by the department are listed on Table 57, page 189.

#### EXHIBITS

Canada's progress in the health and welfare fields was described to audiences at home and abroad through exhibits. Those for external use were built for the division by the Canadian Exhibition Commission of the Department of Trade and Commerce, those for use in Canada being made by commercial or National Film Board designers.

A large exhibit, *Four Centuries of Hospitalization in Canada*, illustrating the past, present and future of treatment establishments and emphasizing new opportunities provided in this field through the National Health grants for hospital construction, was shown at the annual meeting of the Canadian Nurses Association at Sackville, N.B., in June and at the 50th anniversary convention of the American Hospital Association in Atlantic City, N.J., in September.

The division had exhibits also, in June, at the Canadian Conference on Social Work and at the annual meeting of the Canadian Welfare Council which preceded it, at Hamilton, Ont., at the meeting of the Canadian Federation of Home and School in Winnipeg, Man., in October and at the annual meeting of the American Public Health Association in Boston, Mass., in November.

By special invitation the department participated in the International Education Conference held at Milwaukee, Wis., in January 1949 by the UAW-CIO, when labour leaders from Canada were among the delegates and a large exhibit featuring the National Health Programme and Canada's social security measures held a prominent place on the convention floor.

Officers of this division were on duty whenever and wherever the department set up such an exhibit, in Canada or in the United States.

Arrangements were made for the Physical Fitness Division to be represented by an exhibit at Commonwealth and International Congresses on Physical Education, Recreation and Rehabilitation held in London, England, in July 1948.

### DISPLAYS

The division produced a number of smaller displays mainly for use by provincial health educators. To sets previously designed for rural fairs, government buildings or for the use of voluntary organizations, were added a number of seven-ply veneer panels to illustrate the purposes of grants under the new federal health programme. These covered *public health generally, crippled children, venereal disease, tuberculosis, mental health, cancer, professional training and hospital construction.*

Three-panel corrugated paper displays also produced were, *Your Teeth are Worth Their Weight in Gold, Pathway to Personality, Happy Feet and All Growing Persons need Vitamin D.*

Displays entitled *How to Make the Best Use of Your Family Allowances* were made for each Regional Family Allowances Office.

The division continued to use large show windows of the Ottawa headquarters building of the department and a series of health and welfare displays there attracted wide attention.

### POSTERS

Smaller, simpler, more colourful posters were produced. Cartoon techniques were used in a series for the Industrial Health division and the silk-screen process was applied effectively to posters carrying Indian Health Services' messages to Indians and Eskimos.

In the form of a presentation chart, posters were devised for the Nutrition Division's surveys at Indian residential schools and posters were prepared in three sizes dealing with Vitamin D. For the Dental Health Division a poster was issued on care of the teeth and six kodachrome posters were produced for schools. Information on Family Allowances was contained in a poster designed for use in Newfoundland.

### SCREEN

Outstanding success was achieved again this year with films produced for the Department by the National Film Board of Canada. Some pictures commissioned by the department aroused international interest and won awards for technical excellence and effective subject treatment.

The department has now produced 27 films—eight in colour—and 19 filmstrips. Most of these are available in both English and French. Details of the films are given in the division's catalogue *Let's See*, which tells how they may be obtained for screening. In addition, four film libraries of health and welfare subjects produced in other countries have been extended. They include hundreds of general health, medical and biological, physical fitness and welfare productions.

Formal premieres of several new films were arranged. Example: In December representatives of federal, provincial and municipal governments and of the professions interested attended the first showing in Montreal of the new French film *Maternité*, produced for the department's Child and Maternal Health Division. On that occasion Hon. Paul Martin autographed and publicly presented a prospective mother with the 1,000,000th copy of *Canadian Mother and Child*.

In co-operation with the Narcotic Control Division of the Department and the Royal Canadian Mounted Police, the division worked with the National Film Board on a 34-minute film entitled *Drug Addict*.

The Mental Mechanisms series for the Mental Health Division was developed further by production of *Over-Dependency*, revealing the background of adult problems of a man who had been pampered in his youth.

A new series on child development and training entitled *Ages and Stages* was commenced. The first of these is to be called *He Acts His Age*. A colour cartoon film was underway for the Dental Health Division. It will appear under the title *Teeth Are to Keep*.

Arrangements were made for general theatrical showing of a newsclip featuring Hon. Paul Martin speaking on significance of the National Health Programme.

New filmstrip productions were: *Brush Up on Your Teeth*, *The Daily D*, *If the Shoe Fits*, *Speaking of Family Allowances* and *Ten Little People and Their Teeth*.

Joint production by this Department and the National Cancer Institute of the United States of a 30-minute sound film on cancer research was arranged this year. Cost of this production will be shared, the film to be made in Canada by the National Film Board. It is hoped to have the film ready early in 1950 for showing to professional audiences, high school and college science students and health and civic groups in both countries.

(Films and filmstrips sponsored by the Department are listed in Table 58, page 193).

### BIOLOGICAL PHOTOGRAPHIC LABORATORY

As the biological photographic laboratory became increasingly useful, steps were taken to improve studio facilities and to provide new technical equipment required.

The Chief Photographer perfected a compact, high-speed camera unit capable of taking critically-sharp medical photos without posing of subject, adjustment of focus, lighting or aperture. This apparatus is admirably adapted for such work as nutrition or dental surveys.

Photographic equipment was provided to departmental officers on field work and numbers of excellent pictures not obtainable elsewhere were added to the division's photo library.

### DISTRIBUTION

The Distribution section handled shipments of several million pieces of informational material to provincial, municipal and other agencies. Increasing quantities of health literature were provided by special arrangement to organizations in the United States and in Newfoundland. Requests were received from many quarters, including authorities in Europe and in India.

More than 200,000 direct applications for material of all types were received. Many such enquiries were referred to provincial health authorities or were turned over to private agencies producing the material requested.

The Distribution section maintained the division's stores of publications, kept distribution lists for departmental bulletins, attended to shipping of displays and exhibits. It was also charged with care and storage of the division's growing radio transcription and film-print collections.

### PUBLIC RELATIONS

In addition to dealing directly with many visitors and correspondents requiring information, the division took advantage of every occasion for introducing the health and welfare services to the public. Arrangements were made for graduate nurses attending a Public Health course at the University of Ottawa to visit the department each week during the winter for talks by senior officials. Special film showings on health subjects were arranged for the nurses, with co-operation of the Staff Training section of the Personnel Division.

Similarly, the director outlined the work of the department, with emphasis on informational activities, to groups of officers-in-training for appointments as Canadian Trade Commissioners and to groups of supervisory civil servants attending a course in Public Administration.

On another occasion the director and the editors met students of the Journalism Course at Carleton College, Ottawa, to explain government information methods. This constituted a lecture for the students and was the basis of test papers on this branch of journalism.

The division was represented on numerous interdepartmental committees, including those associated with entry of Newfoundland into Confederation and with Canadian information abroad. Editors attended conventions both in Canada and in the United States, including the annual meeting in Vancouver of the Canadian Public Health Association, when the director was one of the speakers.

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## LEGAL DIVISION



The Legal Division experienced a growing volume of work this year as administration of the numerous statutes for which this Department is responsible gave rise to many problems of a legal and semi-legal nature and became increasingly exacting due to the general expansion in both health and welfare fields.

Legal duties, among others, included drafting of legislation and regulations and revising and amending the same, preparing submissions to Council, contracts and agreements with provincial authorities and with private groups and individuals, drawing up leases and legal documents of all kinds, advising on prosecutions and the preparation of litigation, supervising collection of overpayments under the Family Allowances Act, and interpreting statutes and regulations for the Department and its officers.

Among statutes administered by the Department are, the Department of National Health and Welfare Act, the Canada Medical Act, the Family Allowances Act (1944), the Food and Drugs Act, the Leprosy Act, the National Physical Fitness Act, the Old Age Pensions Act, the Opium and Narcotic Drug Act, the Proprietary or Patent Medicine Act, the Public Works Health Act, the Quarantine Act and Part V of the Canada Shipping Act.

In addition to being called upon to draft opinions and rulings on the interpretation and application of the various statutes, the division was responsible for services of an administrative nature as well as for providing representation in an advisory capacity on a number of policy-making committees and boards.

## HEALTH BRANCH

The inauguration this year of the health grants programme presented many problems of a legal as well as of an administrative character. While the general terms of the grants were as set out in the announcement of the Minister on May 14, it was provided that they were to be administered under terms and conditions to be approved by the Governor in Council. The preparation of these terms and conditions was the responsibility of the Legal Division after consultation with the various authorities who would be concerned in the administration of the grants. The announcement provided that each grant should be subject to special conditions and these conditions were accordingly prepared with the particular purpose of each grant in mind. This involved the preparation of ten separate Orders-in-Council, as well as of forms for the use of the Minister and other administrative authorities.

Because the health grants programme was new and there was little or no precedent to follow, many difficult interpretative points were referred to the division. Consideration of these involved a knowledge of provincial health laws as well as of the administrative procedures followed by the various provinces.

During the year consideration was given to amendments to the various orders in the light of experience. Preliminary consideration was likewise given to appropriate orders to enable the health grant programme to be extended into the following year and also to implement new administrative procedures which experience had indicated would be most desirable.

Altogether, the legal duties involved in connection with the inauguration of the health grant programme occupied a very substantial part of the work performed by the division during the year.

In particular, the following are amongst the legal services performed with reference to various statutes:

*Food and Drugs Act*—The Legal Division assisted in the completion of the revision of the Food and Drugs Regulations. These regulations, which fix the standards of quality and identity for food and drugs in Canada, had not been consolidated since 1942.

This work required research and study of comparative legislation in other countries as well as attendance at many meetings with specialists in this field. The complete regulations were approved by Order-in-Council on April 5 to become effective on May 1st, 1949.

In addition, the division assisted in a number of important prosecutions for the violation of the Act and regulations. Moreover, in view of its nature, the Food and Drugs Act continuously gave rise to legal and semi-legal problems covering all phases of the administration of the Act and so required the constant attention of the division.

Union with Newfoundland called for special study of the Food and Drugs regulations in the new province where, in some cases, the standards of quality or identity differ from the Canadian standards. This is particularly true of enriched flour, in respect of which the terms of union specially provided that the existing regulations in Newfoundland should not be altered for a period of three years. Thus many problems of a mixed legal and administrative character required the assistance of this division, including a visit to Newfoundland by the Legal Adviser to consult with local authorities in an effort to arrive at a satisfactory solution of the various questions at issue.

*The Opium and Narcotic Drug Act*—As in previous years, the Legal Division worked in close co-operation with the Narcotic Control Division which is concerned not only with the illicit traffic of narcotics but also with the legitimate trade. The Legal Division is required to examine the more important cases of prosecution and is consulted in each instance of appeal. It is also charged with the drafting of the necessary proceedings with respect to seizure and forfeitures under Section 21 of the Act, and it generally deals with the legal aspects of the various problems which arise in the practical application of the Act and regulations.

During the year the Legal Adviser was a member of the Technical Advisory Committee on Narcotic Drug Addiction and co-operated in drafting its reports and recommendations. He also served on the committee investigating new drugs, and was charged with the consideration of existing legislation in Canada and elsewhere.

*Indian Health Services*—The division was instrumental in exploring for the Directorate of Indian Health Services the legal aspects of the proposed plan to extend to Indians in British Columbia the benefits of that province's Hospital Insurance Act. The division assisted in drafting the enabling authority in this connection for consideration of the Governor in Council.

Considerable preliminary work was also done in connection with the revision of the regulations concerning the provision of health services to Indians across Canada, and the duties of the directorate in respect thereto.

In addition a considerable number of legal documents were drafted or examined on behalf of the directorate with respect to the construction of hospitals and other

medical facilities, the transfer of staff, and many other matters required in the administration of Indian Health Services.

*The Quarantine Act*—The division revised and consolidated regulations under the Quarantine Act administered by the Quarantine, Immigration Medical and Sick Mariners Services. These were submitted to Council and enacted by Order-in-Council on September 2, 1948. Attention was also given to the preparation of proposed aerial quarantine regulations which are now in the process of being formulated.

### WELFARE BRANCH

*The Physical Fitness Act*—Agreements under the National Physical Fitness Act with the provinces of British Columbia, Alberta, Manitoba, Nova Scotia, and Prince Edward Island, were renewed during the year, the division being responsible for these agreements and the various submissions to the Governor in Council to obtain official sanction for them. The services of the division were also required in the same connection for the proposed agreement with the Province of Ontario and in relation to the necessary enabling Order-in-Council.

Union with Newfoundland required a consideration of the Act to extend its benefits to the new province and an appropriate section was added to the Statute Law Amendment (Newfoundland) Act in order to increase the Physical Fitness Fund proportionately to include a share for Newfoundland.

*The Family Allowances Act*—The regulations under the Family Allowances Act, after discussion and consultation with the administrative officers, were consolidated by the division and were approved by the Governor in Council by Order-in-Council on September 15, 1948. The Act itself was amended before the expiration of the fiscal year in order to decrease from three years to one year the period of residence required to become eligible and also to do away with the decreasing scale in the amount of the allowances for families with five or more children. Preliminary work in this connection was done by the division, in addition to the drafting of the proposed amendments. Union with Newfoundland also required an appropriate section in the Statute Law Amendment (Newfoundland) Act and special regulations thereunder, in order to make the Family Allowances Act applicable to the new province as of the date of the union.

Prosecutions against offenders for obtaining allowances fraudulently were initiated in the Province of Alberta, British Columbia, Ontario and Quebec, the preparation of such cases being among the duties of the division. Fourteen prosecutions were launched, eight of which were completed and resulted in convictions. The remaining five cases have not been concluded.

The collection procedure for Family Allowances overpayments is also supervised by this division and although no legal proceedings were taken this year, some two hundred and fifty accounts were reviewed and approximately five hundred letters were sent. Questions of interpretation in the practical application of the Family Allowances Act and regulations were also referred to the division for advice and more than one hundred opinions and rulings were given in this connection during the year.

*The Old Age Pension Act*—During the year, a plan for the administration of pensions in the Yukon Territory was approved and an agreement concluded. This involved an examination of the pension scheme proposed by the Yukon Territory together with the necessary enabling legislation and the preparation of an agreement concerning the payment and administration of pensions in the Territory.

The application of the Act to Newfoundland was considered and in this connection an appropriate section was included in the Statute Law (Newfoundland) Amendment Act in order that the residence and other requirements should be made to coincide.

The division also prepared the proposed agreement with Newfoundland under the Act, with the necessary proceedings for the approval of the Governor in Council. This agreement has since been sanctioned.

*War Charities Act* Administration of the War Charities Act which, for practical purposes, was transferred to this Department, gave rise to various other legal problems in connection with the winding up of the various funds.

*General* In addition to the specific duties outlined above, the division was concerned with the incorporation of the Canadian Tuberculosis Association. The division is called upon to advise, in co-operation with the Department of the Secretary of State, on the legal aspects of incorporation of companies where questions of public health and welfare are concerned. The division represented the department on the Medical Benefit Committee for Civil Servants.

The division also works closely in co-operation with the Director of Health Insurance Studies. This involves consideration of social security legislation in other countries, the study of constitutional and related problems in Canada, attendance at conferences, and the drafting of reports, recommendations and proposed legislation.

The above outline of legal and administrative services performed during the year in no way exhausts the variety and extent of matters and problems handled by the Legal Division in a particularly busy period.

## LIBRARY



The Departmental Library now has branches in the Laboratory of Hygiene and the Food and Drug directorate, the latter having been organized during the past fiscal year.

Books, serial publications, pamphlets and government documents on subjects related to the Department's work were added to the Library's stock. Particular attention is being given to the completion of sets of volumes of serial publications on the medical and social sciences, many not hitherto collected in Dominion government libraries.

Much valuable and out-of-print material is being received through the publications exchange of the Medical Library Association and other libraries.

## PERSONNEL DIVISION



Widening of the scope of the Department's activities and responsibilities during the past year was reflected in demands upon the Personnel Division, in which are centralized, directly under the Deputy Ministers, all matters of departmental organization and personnel management.

Further development and streamlining of staffs of the numerous professional, scientific and administrative services called for close liaison with senior officials as the division sought to provide all divisions with the type of assistance required to cope with increasingly-complex duties.

Among matters dealt with by the division were:

*Establishment* The division advised on matters of organization within the department and represented it in dealings concerning them with the Civil Service Commission and with Treasury Board.

*Personnel* The division acted as adviser on the recruitment, selection, transfer and promotion of personnel within the department. The majority of positions are governed by the Civil Service Act. The Personnel Division works closely with the

Civil Service Commission in the selection and movement of people in positions classified under the Act, and in the case of positions exempt from its provisions, acts independently in the selection and movement of staff.

*Staff Training*—A staff training programme was operated within the department by the Personnel Division. This involved the induction of new staff, training of supervisors in job methods, job relations and other supervisory responsibilities, and the provision of special courses in such fields as clerical and filing operations, secretarial and stenographic work, and government administration generally. In this programme the division was closely associated with the Staff Training Branch of the Civil Service Commission.

*Accounting*—A small Accounts Section was operated by the Personnel Division to deal with matters of staff pay, up to the point of cheque issue by the office of the Comptroller of the Treasury. The Division also prepared that portion of Main and Supplementary Estimates relating to staff.

*Records*—Establishment and personnel records were maintained in this division. These were used as the basis for staff changes, reports to other agencies, for parliamentary returns and for similar purposes.

*Leave and Attendance*—In cooperation with the Civil Service Commission, the division administered the leave and attendance regulations of the department.

*Counselling*—A counselling service was provided for departmental employees, who were encouraged to discuss with the division, in confidence, problems of a personal nature or matters related to conditions of employment. In this connection the division made full use of the counselling services provided by the department's Civil Service Health Division and by the Civil Service Commission.

*Efficiency Rating*—The administration of an efficiency rating programme, as a basis for the award of annual increases, for promotions or relating to staff movements, was carried out by the Personnel Division.

*Other Functions*—In addition to all the above, the Personnel Division acted as representative of employees of the department in such matters as related to superannuation, workmen's compensation, income tax and unemployment insurance.

This division is essentially advisory. Final authority for staff recruitment rests, in the case of classified positions, with the Civil Service Commission. Final authority for the establishment of positions lies with Treasury Board. Direction of staff is the responsibility of the various divisions themselves.

Basically, the Personnel Division is called upon to advise on matters of personnel management and administration of those phases of the staff programme which are a departmental responsibility. Its objective has been so to co-ordinate personnel relations within the department as to achieve a maximum of production with a minimum of friction and dislocation of functions, having always in mind the general well-being of the employee as well as the public interest.

Total permanent and temporary staff of the Department as at March 31, 1949, is shown in Table 59, Page 196.

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## PURCHASING & SUPPLY



This service division has the responsibility of supplying materials and equipment of all kinds to the department. The increase in the volume of work and responsibility during the past year is clearly supported by, and reflected in, the reports of other divisions.

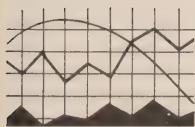
The purchase of technical and scientific equipment for the various laboratories of the department was a major responsibility.

The union of Newfoundland with Canada resulted in additional work, in that a new Regional Family Allowance office was completely equipped. Included in provisioning were the anticipated needs of other administrative offices to be opened in the new province.

The Directorate of Indian Health Services of the department, having experienced tremendous expansion during the past year, added greatly to the work of this division. One new hospital was opened during that period and the bed capacity of two others was greatly increased. In addition, fifteen new Health Stations were constructed, fully equipped and provisioned during the year. There are 20 hospitals and 72 other health stations, many located in the Eastern Arctic and Northwest Territories. These all require continuous supplies of every description.

The provision of new equipment has been a major activity all year.

## RESEARCH DIVISION



There was expansion, this year, in both the variety and amount of work carried on by the Research Division, which was established in December 1944 to conduct socio-economic research in health and welfare, as provided under Section 5(b) of the Department of National Health and Welfare Act.

Principal responsibility of this division is the collection, analysis and evaluation, for officers of the department, of basic information in all aspects of health, welfare and social security, with special emphasis on underlying principles, costs, methods of financing, social effectiveness and administrative methods.

The division participates in surveys conducted by this department and other government agencies, and advises in the drawing up of departmental policy and programmes. Reports and monographs prepared on request, or arising from the work of the division, are published from time to time and are supplied to government and other organizations in Canada and abroad. In the same way, the findings of the division have provided background data for addresses by departmental officers at conferences and other meetings.

This year the number of reports and memoranda prepared for departmental use was greatly augmented, advisory services to other divisions were in greater demand and requests for services of the division from outside sources also increased.

In addition to the detailed reports on various phases of health and welfare work prepared for the United Nations, its specialized agencies and other national and international health, welfare and labour organizations, there was a great increase in the number of requests for information from outside organizations and individuals, and from other countries.

A considerable amount of time was spent by the division in assisting health and welfare personnel from abroad who came to Canada to study social legislation here. Among the visitors were three holders of Fellowships from the United Nations, Dr. Mehta, of India, Dr. Djang, of China and Mr. Manalang, of the Philippines.

The initiation and development of the National Health Programme entailed heavy demands on the resources of the division. In addition to extensive preliminary investigations carried out prior to the announcement of the Programme, assistance was rendered to the Directorate of Health Insurance Studies through the maintenance of a running analysis of the Programme and aid given in the drawing up of the various forms used in the administration of the grants and by provincial health survey teams. The division also carried on specific research projects arising from the Programme.

An important part was played by the division, also, in work connected with the union of Newfoundland with Canada and the staff of the division prepared a series of bulletins on health and welfare services in the new province.

### *National Health Programme*

In connection with the planning and development of the National Health Programme, the Officer-in-Charge of the Research Division served as secretary to the interdepartmental committee set up to report to Cabinet on the establishment of the grants, and participated in discussions held with representatives of the Canadian Medical Association, the Canadian Hospital Council, the Canadian Tuberculosis Association and other interested organizations. The division took an active part in the collection and preparation of background material for the programme at that time, and assisted in drawing up the Orders-in-Council governing payment of the grants.

When the Programme began to function, the division was made responsible for the maintenance of a continuing analysis of its development. This entailed the keeping of an up-to-date diary, copies of which were provided to the Minister, the Deputy Minister of National Health, the Director of Health Insurance Studies and other officers of the department. The diary recorded all significant points concerning projects under each of the ten grants, and provided material from which reports were made periodically, or as required, on all aspects of the Programme.

The division was also actively concerned with gathering data to assist in the direction of the Programme. A considerable amount of research was done on similar programmes in other countries, several members of the staff making close studies in Washington of the progress of the United States health grant programme.

In addition, the division assisted in the carrying out of the provincial health surveys required under the Health Survey Grant. Forms were drawn up, to be used by the provinces, for the recording of comparable data on public health services and personnel. Material was procured from the United States Public Health Service and from various States whose survey work was considered outstanding, and this material was distributed to the provinces. Technical advice and assistance were also supplied on request.

### *Surveys*

The Research Division took an active part in a number of family income and expenditure studies. Assistance was given to the Institute of Public Affairs, Dalhousie University, in connection with a study of family budgets of wage-earners in Wolfville, Antigonish and Sydney, N.S., and in Sackville, N.B.

Also, the division assisted the Agricultural Economics Division of the Marketing Service, Department of Agriculture, in the analysis of family allowance expenditures, as part of budget studies carried out in rural areas. The division cooperated with the Dominion Bureau of Statistics in the preparation of the questionnaire for the survey of family expenditures conducted by the Bureau in September, 1948.

The division continued to participate in the fluorine studies being conducted among school children by the Dental Health Division of the department, in cooperation with the Ontario Department of Health. During the year a member of the division's staff spent some time in Stratford, Ont., in connection with the selection of the sample and on other work related to this project.

Assistance was also given to the Nutrition Division in carrying out a survey on Cape Sable Island, N.S., through advice on the selection of the sample to be studied. Preliminary plans were also made concerning the choice of a representative sample of industries in New Brunswick, to be used for a survey of industrial health hazards in that province. Exploratory work was carried on in connection with a survey of social workers in Canada.

### *Register of Physicians*

Publication was continued by the division of the annual *Survey of Physicians in Canada*, an account of the numbers, geographic distribution, age distribution,

etc., of all physicians in Canada. This report is compiled from the records of the Register of Physicians, maintained through voluntary returns from the physicians themselves, as well as from the reports of the various medical associations, universities and other organizations concerned with the activities of physicians.

Special projects undertaken during the year by the Register of Physicians involved a comprehensive report of all ex-service medical officers in Canada, prepared at the request of the Defence Medical Association of Canada. The Ontario Medical Association was provided with a detailed report of Ontario physicians and preparations were made for the micro-film recording of some 5,000 cards, constituting the Ontario section of the Register, for the Ontario Health Survey Committee.

In addition, such departmental divisions as Narcotic Drug Control, Civil Service Health, Indian Health Services, etc., as well as other government departments and medical organizations throughout the country, made constant use of the services of the Register. Particular use of the Register was made by the Departmental Secretary's Division, in keeping up to date the departmental mailing lists through which all physicians in Canada receive the various departmental publications, notices with respect to regulations, amendments to Acts, etc., and posters, notices and publications of such bodies as the Civil Service Commission and the Canadian Tuberculosis Association.

#### *Reports to International Agencies*

A great deal of research work was carried on during the year to provide specific reports on various aspects of health and welfare in Canada as requested by the United Nations and its specialized agencies. In addition to an annual report on changes in legislation affecting child welfare in Canada, prepared for the Social Commission, the division drafted comprehensive reports on family assistance measures in Canada, juvenile delinquency and youth guidance. The Social Commission was also supplied with bibliographies of Canadian publications in the fields of health, welfare and social security.

During the year the division assumed responsibility for keeping the World Health Organization informed of all changes in provincial and federal health legislation occurring in Canada, and for preparing other background data for W.H.O. Statistical data on social security were prepared for the International Labour Organization.

#### *Other Research Projects*

The study of social insurance and assistance measures and related health and welfare services in other countries was continued this year. The Research Division carried out background research which was used in assessing costs for the 1949 amendments to the Old Age and Blind Pensions and Family Allowances Acts. A comprehensive review was made of the Mothers' Allowance legislation in all the provinces and a report prepared for publication. Extensive studies were made in connection with subjects to be covered in speeches made during the year by the Minister, the Parliamentary Assistant, the Deputy Ministers and other senior departmental officials, and background data were provided to them. Among the subjects covered were, Tuberculosis, Arthritis, Cancer, Mental Health, Nursing in Canada, the National Health Programme, Old Age Pensions and Family Allowances.

Study was also given to socio-economic aspects of medical and hospital care plans in Canada, both governmental and voluntary, and a comprehensive report was drawn up on health and related facilities and services in the Northwest Territories.

The division was again responsible for the preparation of those sections of the *Canada Year Book* and the publication *Canada, 1949*, dealing with federal and provincial health and welfare activities. This work was done as service for and in

cooperation with divisions concerned with particular programmes and with the different provinces. Reports on different Canadian programmes were also drawn up for the United States Federal Security Agency, and for other foreign governments.

Assistance was also given to the Parliamentary Committee on Prices, through the assembling of background material before the Committee sat and through the preparation of information on different aspects being investigated by the Committee.

The division continued to be responsible for the feature *Global Report* in the department's magazine *Canada's Health and Welfare* and members of the staff contributed a number of articles to other publications, both in Canada and in the United States.

#### *Committees and Conventions*

During the year members of the staff of the division participated in the work of conventions of health and welfare organizations and took an active part on several departmental and interdepartmental committees. The Officer-in-Charge delivered a paper on *Employment Problems of Older Workers* to the 75th National Conference on Social Work in the United States and the Fourth International Conference on Social Work, held jointly in Atlantic City, N.J., in April, 1948. At the annual meeting of the Public Welfare Division of the Canadian Welfare Council in Winnipeg in January, 1949, the Officer-in-Charge presented a paper on *Migration and Residence Requirements for Public Assistance*, and, during the year, represented the department on the Research Committee of the Canadian Welfare Council.

The division was represented at the Canadian Conference of Social Work, the annual meeting of the Canadian Welfare Council and the annual meeting of the American Public Health Association. It also took part in a Conference on Child Welfare called by the Child Welfare Division of the Canadian Welfare Council and was represented on the Council's committee on classification of social workers. The division was represented at the first National Conference of Sports Governing Bodies, and on the Institute held in connection with the Capital District Recreation Planning Survey.

Members of the staff of the division attended several committee meetings held for the study of immigration matters.

Assistance was given by the division in committee work preparatory to the National Conference on Hospital Statistics, members of the staff participating in that conference. The division was represented on an interdepartmental committee on morbidity statistics, and a member of the staff served as secretary to the Technical Advisory Committee on Narcotic Drug Addiction. The Officer-in-Charge is one of the departmental representatives on the interdepartmental committee established to plan a National Conference on the Rehabilitation of Handicapped Persons.

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## CHIEF TREASURY OFFICER

The Chief Treasury Officer's statements of Expenditures as at March 31, 1949, and Open Suspense and Revenue Accounts, will be found in Tables 60 and 61, pages 197 to 205 inclusive.

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TABLE 1  
(Child and Maternal Health Division)  
CHILD AND MATERNAL MORTALITY  
1926 to 1947 inclusive

Year	Live Births		Stillbirths		Total deaths		Maternal Deaths		Deaths under One Year		Deaths under One Month		Marriages	
	Number	Rate per 1000 Pop.	Number	Rate 1000 Live Births	Number	Rate per 1000 Pop.	Number	Rate 1000 Live Births	Number	Rate 1000 Live Births	Number	Rate 1000 Live Births	Number	Rate per 1000 Pop.
1926	232,750	24.7	7,105	30.5	107,454	11.4	1,317	5.7	23,692	102	11,091	48	66,658	7.1
1927	234,188	24.3	7,336	31.3	105,292	10.9	1,300	5.6	22,010	94	10,532	45	69,515	7.2
1928	236,757	24.1	7,577	32.0	109,057	11.1	1,331	5.6	21,195	90	10,349	44	74,311	7.6
1929	235,415	23.5	7,566	32.1	113,515	11.3	1,341	5.7	21,674	92	10,430	44	77,388	7.7
1930	243,495	23.9	7,707	31.7	109,306	10.7	1,405	5.8	21,742	89	10,247	42	71,657	7.0
1931	240,473	23.2	7,619	31.7	104,517	10.1	1,215	5.1	20,360	85	9,897	41	66,591	6.4
1932	235,666	22.5	7,284	30.9	104,377	9.9	1,181	5.0	17,263	73	8,845	38	62,531	6.0
1933	222,868	20.9	6,848	30.7	101,968	9.6	1,111	5.0	16,284	73	8,271	37	63,865	6.0
1934	221,303	20.5	6,452	29.2	101,582	9.4	1,167	5.3	15,870	72	7,777	35	73,092	6.8
1935	221,451	20.3	6,449	29.1	105,567	9.7	1,093	4.9	15,730	71	7,747	35	76,893	7.0
1936	220,371	20.0	6,350	28.8	107,050	9.7	1,233	5.6	14,574	66	7,393	34	80,904	7.3
1937	220,235	19.8	6,275	28.5	113,824	10.2	1,071	4.9	16,693	76	7,527	34	87,800	7.9
1938	229,446	20.5	6,426	28.0	106,817	9.5	968	4.2	14,517	63	7,268	32	88,438	7.9
1939	229,468	20.3	6,365	27.7	108,951	9.6	967	4.2	13,939	61	7,038	31	103,658	9.2
1940	244,316	21.5	6,634	27.2	110,927	9.8	978	4.0	13,783	56	7,256	30	123,318	10.8
1941	255,317	22.2	6,882	27.0	114,639	10.0	901	3.5	15,236	60	7,817	31	121,842	10.6
1942	272,313	23.4	7,132	26.2	112,978	9.7	818	3.0	14,651	54	7,653	28	127,372	10.9
1943	283,580	24.0	6,801	24.0	118,635	10.1	798	2.8	15,217	54	8,384	30	110,937	9.4
1944	284,220	23.8	6,705	23.6	116,052	9.7	776	2.7	15,539	55	8,282	29	101,496	8.5
1945	288,730	23.9	6,668	23.1	113,414	9.4	660	2.3	14,823	51	8,244	29	108,029	8.9
1946	330,732	26.9	7,121	21.5	114,931	9.4	595	1.8	15,434	47	8,991	27	134,088	10.9
1947	359,094	28.6	7,461	20.8	117,725	9.4	554	1.5	16,336	45	9,507	26	121,311	10.1



TABLE 3  
(Civil Service Health Division)  
HEALTH UNIT STATISTICS—BY MONTHS  
Fiscal Year 1948-49

	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total
<b>TOTAL VISITS</b>	4,429	4,846	5,138	4,429	3,958	5,537	5,845	6,079	6,082	6,764	6,830	7,654	67,591
Male	1,675	1,976	2,092	1,834	1,543	2,122	2,380	2,444	2,395	2,723	2,820	3,138	27,072
Female	2,824	2,870	3,046	2,595	2,415	3,415	3,465	3,635	3,687	4,041	4,010	4,516	40,519
<b>NATURE OF VISITS</b>													
First Visits	3,301	3,190	3,432	3,014	2,861	4,032	3,988	4,191	4,307	4,822	4,989	5,596	47,723
Repeat Visits	1,128	1,656	1,706	1,415	1,097	1,505	1,857	1,888	1,775	1,942	1,841	2,058	19,868
Illness	1,617	1,854	1,923	1,712	1,643	2,295	2,460	2,391	2,449	2,674	2,683	3,009	26,710
Accident	501	661	862	679	574	696	675	662	795	712	656	779	8,252
Consultation	662	809	865	853	548	549	627	831	618	720	881	956	8,919
Return to work Visits	1,649	1,522	1,488	1,185	1,193	1,997	2,083	2,195	2,220	2,658	2,610	2,910	23,710
Days Lost due to Casual Absence	1,649	1,510	1,513	1,096	1,132	2,141	2,236	2,236	2,200	2,816	2,877	2,916	24,322
<b>CLASSIFICATION</b>													
Respiratory	965	654	425	311	401	1,270	1,268	1,011	1,248	1,635	1,793	1,863	12,844
Digestive	389	418	480	457	483	504	483	570	584	573	576	623	6,140
Non-respiratory and non-digestive—													
Skin and Cellular	148	214	299	303	260	237	226	228	248	213	208	210	2,794
Menstrual Disorders	318	292	316	294	216	299	286	362	340	348	309	341	3,721
Emotional Disorders, Nervousness,	69	67	87	66	58	62	86	82	76	64	92	93	902
Ill-defined and All Others	1,079	1,124	1,275	1,109	1,024	1,178	1,204	1,481	1,304	1,486	1,467	1,882	15,613
<b>NON-INDUSTRIAL INJURIES</b>	202	280	359	330	317	367	282	281	341	355	348	371	3,843
<b>INDUSTRIAL INJURIES</b>	128	128	179	140	101	115	151	176	163	145	193	207	1,826
<b>CONTAGIOUS DISEASES</b>	3	3	12	4	1	—	2	—	3	3	3	6	40
<b>DISPOSAL</b>													
Sent Home	118	106	96	66	96	171	155	105	129	183	160	229	1,614
Return to Work	4,311	4,740	5,042	4,363	3,862	5,366	5,690	5,974	5,953	6,581	6,670	7,425	65,977
<b>REFERRALS</b>													
Referred to H.C.	61	74	81	44	40	53	47	84	73	86	104	92	839
Referred to Family Physician	130	204	273	210	226	382	342	376	248	346	354	330	3,481
No. of Patients Under Supervision	9,966	11,849	10,869	11,443	11,347	13,004	13,280	12,907	12,969	12,933	13,400	13,656	
<b>NO. OF HEALTH UNITS IN OPERATION</b>	9	10	10	10	10	11	11	11	11	11	12	12	

TABLE 4  
(Civil Service Health Division)  
HEALTH CENTRE STATISTICS  
Fiscal Year 1948-49

Items	Total
<b>TOTAL VISITS</b> .....	5,267
Male.....	3,626
Female.....	1,641
First Visits.....	3,447
Repeat Visits.....	1,820
<b>PHYSICAL EXAMINATIONS</b>	
Pre-Employment, Permanency, Etc.....	1,641
Obligatory Examination with immunization.....	56
Voluntary.....	203
Other.....	280
<b>OTHER SERVICES</b>	
Accident Industrial.....	76
Accident Non-Industrial.....	201
Immunization.....	743
Consultation Interview, etc.....	2,067
<b>DISPOSAL</b>	
Return to Work.....	5,157
Sent Home.....	100
Referred to Family Physician.....	237
(This Item included in Total Disposal up to Dec. 1947)	
<b>LABORATORY PROCEDURES</b>	
Platelets.....	1
Haemoglobin Tests.....	293
Red Blood Counts.....	173
White Blood Counts.....	230
Differential Counts.....	42
Urinalyses.....	2,565
Vene punctures for Serology.....	69
Tests for Sedimentation Rates.....	67
Glucose Tolerance Curves.....	16
Estimations of Fasting Blood Sugars.....	9
Colour Index.....	41
Stool Examinations.....	19
<b>X-RAY</b>	
Hand.....	52
Wrist.....	24
Elbow.....	11
Shoulder.....	18
Humerus.....	1
Foot.....	20
Ankle.....	23
Knee.....	12
Pelvis.....	1
Spine—Cervical.....	15
—Dorsal.....	9
—Lumbar.....	28
Skull.....	3
Sinuses—Frontal.....	16
Jaw.....	1
Chest.....	1,322
Ribs.....	15
Kidney.....	1
Stomach (6hr Plate G.I. Series).....	11
Chest (Photo-roentgen unit).....	2,686
Coccyx.....	1

TABLE 5  
(Civil Service Health Division)

## SICKNESS IN THE CIVIL SERVICE

April 1, 1948-March 31, 1949

Time lost	Number of illnesses			Total days lost			Average days lost per illnesses
	Male	Female	Total	Male	Female	Total	
*1-3 days . . . . .	4,948	6,240	11,188	9,929	11,905	21,834	2.0
4-9 days . . . . .	10,357	7,535	17,892	63,891	45,754	109,645	6.1
10-30 days . . . . .	7,837	4,850	12,687	130,595	79,993	210,588	16.6
Over 30 days . . . . .	3,643	1,844	5,487	256,187	118,399	374,586	68.3
Total . . . . .	26,785	20,469	47,254	460,602	256,051	716,653	15.2

\*Note: These figures represent certified illness only and do not include "casual" sick leave of less than four days requiring no physician's certificate except where allowance of eight days has been exhausted.

TABLE 6  
(Civil Service Health Division)

SICKNESS IN THE CIVIL SERVICE

Number of illnesses and number of days lost by class of disease, showing the average days lost for each class, by sex.

April 1, 1948 - March 31, 1949

Int. List Number 6th Rev.	Class of disease	Number of illnesses			Number of days lost			Average days lost		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
001-138	Infective and parasitic diseases	804	469	1,273	36,608	15,974	52,582	45.5	34.1	41.3
140-239	Neoplasms	304	362	666	12,052	14,240	26,292	39.6	39.3	39.5
240-289	Allergic, endocrine system, metabolic and nutritional diseases	511	301	812	10,862	6,500	17,362	21.3	21.6	21.4
290-299	Diseases of the blood and blood-forming organs	95	272	367	3,007	6,764	9,771	31.7	24.9	26.6
300-326	Mental, psychoneurotic, and personality disorders	808	960	1,768	25,540	27,350	52,890	31.6	28.5	29.9
330-398	Diseases of the nervous system and sense organs	1,125	775	1,900	24,189	8,740	32,929	21.5	11.3	17.3
400-468	Diseases of the circulatory system	1,743	498	2,241	65,719	14,330	80,049	37.7	28.8	35.7
470-527	Diseases of the respiratory system	10,575	9,460	20,035	94,480	71,085	165,565	8.9	7.5	8.3
530-587	Diseases of the digestive system	3,674	2,635	6,309	67,098	30,849	97,947	18.3	11.7	15.5
590-637	Diseases of the genito-urinary system	563	1,261	1,824	14,875	13,948	28,823	26.4	11.1	15.8
640-689	Deliveries and complications of pregnancy, childbirth and the puerperium	—	93	93	—	1,663	1,663	—	17.9	17.9
690-716	Diseases of the skin and cellular tissue	1,170	663	1,833	15,048	6,460	21,508	12.9	9.7	11.7
720-749	Diseases of the bones and organs of movement	1,973	678	2,651	35,252	10,754	46,006	17.9	15.9	17.4
750-759	Congenital malformations	22	16	38	394	302	696	17.9	18.9	18.3
780-795	Symptoms and ill-defined conditions	1,123	1,028	2,151	13,319	11,357	24,676	11.9	11.0	11.5
800-999	Accidents and results of old injuries	2,295	998	3,293	42,159	15,735	57,894	18.4	15.8	17.6
		26,785	20,469	47,254	460,602	256,051	716,653	17.2	12.5	15.2

TABLE 7  
(Civil Service Health Division)  
SICKNESS IN THE CIVIL SERVICE  
Number of Illnesses by Class of Disease  
1-3 days, 4-9 days, 10-30 days, over 30 days and by Sex  
April 1, 1948—March 31, 1949

Int. List No. 6th Rev.	Class of Disease	1-3 Days			4-9 Days			10-30 Days			Over 30 Days			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
001-138	Infective and parasitic	64	36	100	232	142	374	368	206	574	200	85	285	804	469	1,273
140-239	Neoplasms	26	14	40	51	60	111	117	119	236	110	169	279	304	362	666
240-289	Allergic, endocrine system, etc.	87	60	147	149	87	236	176	90	266	99	64	163	511	301	812
290-299	Blood and Blood-forming organs, etc.	1	18	19	15	60	75	47	130	177	32	64	96	95	272	367
300-326	Mental, psychoneurotic, etc.	54	108	162	140	172	312	349	408	757	265	272	537	808	960	1,768
330-398	Nervous system and sense organs	204	313	517	399	236	635	323	165	488	199	61	260	1,125	775	1,900
400-468	Circulatory system	98	56	154	326	92	418	621	188	809	698	162	860	1,743	498	2,241
470-527	Respiratory system	2,377	2,974	5,351	5,297	4,470	9,767	2,534	1,830	4,364	367	186	553	10,575	9,460	20,035
530-587	Digestive system	811	1,105	1,916	1,139	720	1,859	1,041	523	1,564	683	287	970	3,674	2,635	6,309
590-637	Genito-urinary system	31	588	619	145	292	437	242	266	508	145	115	260	563	1,261	1,824
640-689	Complications of pregnancy	—	14	14	—	18	18	—	48	48	—	13	13	—	93	93
690-716	Bones and cellular tissue	157	129	286	498	315	813	420	188	608	95	31	126	1,170	663	1,833
720-749	Skin and organs of movement	280	181	461	751	236	987	660	170	830	282	91	373	1,973	678	2,651
750-759	Congenital malformations	2	3	5	7	3	10	9	6	15	4	—	8	22	16	38
760-795	Symptoms and ill-defined	380	424	804	374	989	643	272	235	507	507	100	197	1,123	1,028	2,151
800-999	Accidents and injuries	376	217	593	834	363	1,197	718	278	996	367	140	507	2,295	998	3,293
		4,948	6,240	11,188	10,357	7,535	17,892	7,837	4,850	12,687	3,643	1,844	5,487	26,785	20,469	47,254

TABLE 8  
(Civil Service Health Division)

SICKNESS IN THE CIVIL SERVICE

Number of days lost by class of disease

1-3 days, 4-9 days, 10-30 days, over 30 days and by Sex

April 1, 1948-March 31, 1949

Int. List Number 6th Rev.	Class of Disease	1-3 Days			4-9 Days			10-30 Days			Over 30 Days			Total		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
001-138	Infective and parasitic . . . . .	136	79	215	1,534	939	2,473	5,013	3,228	8,241	29,925	11,728	41,653	36,608	15,974	52,582
140-239	Neoplasms . . . . .	45	19	64	308	386	694	2,163	2,240	4,409	9,530	11,595	21,125	12,052	14,240	26,292
240-289	Allergic, endocrine system, etc. . . . .	164	125	289	968	548	1,516	3,133	1,647	4,780	6,597	4,180	10,777	10,862	6,500	17,362
290-299	Blood and blood-forming organs . . . . .	3	35	38	95	373	468	887	2,410	3,297	7,922	3,946	5,968	3,007	6,764	9,771
300-326	Mental, psychoneurotic, etc. . . . .	104	203	307	888	1,166	2,054	6,578	7,614	14,192	15,970	18,367	36,337	25,540	27,350	52,890
330-338	Nervous system and sense organs . . . . .	382	536	918	2,446	1,412	3,858	5,391	2,690	8,081	17,970	4,102	20,072	24,189	8,740	32,929
400-468	Circulatory system . . . . .	207	98	305	2,092	604	2,696	11,856	3,626	15,482	51,564	10,002	61,566	65,719	14,330	80,049
470-527	Respiratory system . . . . .	5,038	6,238	11,276	32,335	26,895	59,230	37,992	27,268	65,260	19,115	10,684	29,799	94,480	71,085	165,565
530-587	Digestive system . . . . .	1,495	1,855	3,350	6,984	4,237	11,221	18,580	9,237	27,817	40,039	15,520	55,559	67,098	30,849	97,947
590-637	Genito-urinary system . . . . .	69	965	1,034	909	1,827	2,736	4,271	4,632	8,903	9,626	6,524	16,150	14,875	13,948	28,823
640-689	Complications of pregnancy . . . . .	—	23	23	—	103	103	—	809	809	—	728	728	—	1,663	1,663
690-716	Skin and cellular tissue . . . . .	330	263	593	3,112	1,971	5,083	6,669	2,896	9,565	4,937	1,330	6,267	15,048	6,460	21,508
720-749	Bones and organs of movement . . . . .	555	350	905	4,747	1,431	6,178	10,899	2,829	13,728	19,051	6,144	25,195	35,252	10,754	46,006
750-759	Congenital malformations . . . . .	3	7	10	46	23	69	191	90	281	154	482	336	394	302	696
760-795	Symptoms, and ill defined . . . . .	620	666	1,286	2,277	1,643	3,920	4,688	4,115	8,803	5,734	4,933	10,667	13,319	11,357	24,676
800-999	Accidents and injuries . . . . .	778	443	1,221	5,150	2,196	7,346	12,278	4,662	16,940	23,953	8,434	32,387	42,159	15,735	57,894
		9,929	11,905	21,834	63,891	45,754	109,645	130,595	79,993	210,588	256,187	118,399	374,586	460,602	256,051	716,653

TABLE 9  
(Civil Service Health Division)

SICKNESS IN THE CIVIL SERVICE  
(Supported by Medical Certificates)  
April 1, 1948-March 31, 1949

Times ill	No. of persons	Total No. of illnesses	Percent of total illnesses
1	23,090	23,090	48.9
2	6,016	12,032	25.5
3	1,924	5,772	12.2
4	695	2,780	5.9
5	293	1,465	3.1
6	136	816	1.7
7	86	602	1.3
8	34	272	.6
9	23	207	.4
10	11	110	.2
11	4	44	.1
12	1	12	.0 (1)
13	4	52	.1
Total	32,317	47,254	100.0

(1) Less than .1 per cent.

TABLE 10  
(Civil Service Health Division)

SICKNESS IN THE CIVIL SERVICE  
Percent distribution of illnesses and days lost by classes  
April 1, 1948-March 31, 1949

Int. List Number 6th Rev.	Class	Percent total illness			Percent total days lost		
		Male	Female	Total	Male	Female	Total
001-138	Infective and parasitic diseases.....	3.0	2.3	2.7	7.9	6.2	7.3
140-239	Neoplasms.....	1.1	1.8	1.4	2.6	5.6	3.7
240-289	Allergic, endocrine system, metabolic and nutritional diseases.....	1.9	1.5	1.7	2.4	2.5	2.4
290-299	Diseases of the blood and blood-forming organs.....	.3	1.3	.8	.6	2.6	1.4
300-326	Mental, psychoneurotic and personality disorders.....	3.0	4.7	3.7	5.5	10.7	7.4
330-398	Diseases of the nervous system and sense organs.....	4.2	3.8	4.0	5.2	3.4	4.6
400-468	Diseases of the circulatory system.....	6.5	2.4	4.7	14.3	5.6	11.2
470-527	Diseases of the respiratory system.....	39.5	46.2	42.4	20.5	27.8	23.1
530-587	Diseases of the digestive system.....	13.7	12.9	13.3	14.6	12.1	13.7
590-637	Diseases of the genito-urinary system.....	2.1	6.2	3.9	3.2	5.5	4.0
640-689	Deliveries and complications of pregnancy, childbirth and the puerperium.....	—	.4	.2	—	.7	.2
690-716	Diseases of the skin and cellular tissue.....	4.4	3.2	3.9	3.3	2.5	3.0
720-749	Diseases of the bones and organs of movement.....	7.4	3.3	5.6	7.7	4.2	6.4
750-759	Congenital malformations.....	.1	.1	.1	.1	.1	.1
780-795	Symptoms and ill-defined conditions.....	4.2	5.0	4.6	2.9	4.4	3.4
800-999	Accidents and results of old injuries.....	8.6	4.9	7.0	9.2	6.1	8.1
		100.0	100.0	100.0	100.0	100.0	100.0

TABLE 11  
(Civil Service Health Division)

FORMS SCHEDULE "J" COUNTERSIGNED  
Separations from service for medical reasons  
April 1, 1948-March 31, 1949

Total Male-190	Total Female-21					Total-211
CAUSE OF DISABILITY	AGE GROUPS					
	Under 40	40-44	45-49	50-54	55-59	Total
Infective and parasitic diseases . . . . .	2	2	3	2	2	11
Neoplasms . . . . .	-	1	1	5	4	11
Allergic, endocrine system, metabolic and nutritional diseases . . . . .	-	-	2	5	2	9
Diseases of the blood and blood-forming organs . . . . .	-	-	-	-	1	1
Mental, psychoneurotic and personality disorders . . . . .	3	3	2	6	6	20
Diseases of the nervous system and sense organs . . . . .	1	-	2	6	7	16
Diseases of the circulatory system . . . . .	-	1	5	33	49	88
Diseases of the respiratory system . . . . .	-	1	1	2	7	11
Diseases of the digestive system . . . . .	-	-	1	6	4	11
Diseases of the genito-urinary system . . . . .	-	-	-	1	3	4
Deliveries and complications of pregnancy, child- birth and the puerperium . . . . .	-	-	-	-	-	-
Diseases of the skin and cellular tissue . . . . .	-	-	-	1	-	1
Diseases of the bones and organs of movement . . . . .	-	1	3	9	9	22
Congenital malformations . . . . .	-	-	-	-	-	-
Symptoms and ill-defined conditions . . . . .	-	-	-	1	1	2
Accidents and results of old injuries . . . . .	-	-	-	3	1	4
TOTAL . . . . .	6	9	20	80	96	211

TABLE 12  
(Food and Drug Divisions)EXAMINATION OF SAMPLES OF THE MORE IMPORTANT FOODS  
Fiscal Year 1948-49

	Laboratories						Total	Adult- erated	Mis- brand- ed
	Hali- fax	Mont- real	Otta- wa	Tor- onto	Win- nipeg	Van- couver			
Alimentary Pastes .....	1	1		1	5		8	1	3
Baking Powder-Leavening Agents or Chemicals .....	13	5		17	8	29	72	13	6
Bakery Products—Cakes, Pastry, etc.	88	51	4	27	28	92	290		180
Beverage and Beverage Concentrates	172	242	49	139	482	191	1275	43	177
Bread, Flour and Cereals .....	25	41	19	40	77	48	250	13	60
Breakfast Foods .....	1	1	1	29	2	45	79		38
Confectionery .....	56	62	19	65	147	407	756	107	208
Dairy Products .....	15	73	29	526	14	117	774	346	46
Dessert Powders and Mixes .....	18	6	8	28	67	1	128	2	26
Eggs and Egg Products .....				2			2		1
Fish and Fish Products .....	168	189	2	51	4	120	534	23	33
Food Colours and Flavours .....	15	33		16	40	211	315	25	95
Foods Oriental .....					53		53		6
Fruit—Fresh .....	106	58		1	524	682	1371	143	27
Fruit—Canned .....	2		2	7	11	105	127		7
Fruit—Dried .....	65	162	43	141	115	410	936	45	27
Fruit—Glazed or Candied .....		1			14	9	24	2	3
Gelatin .....		16			2	19	37	2	28
Honey and Honey Products .....	8	3	3	4	9		27	5	9
Jams and Jellies .....	10	9		2	20	36	77	4	16
Juices and Syrups .....	92	10	6	11	181	165	465	20	34
Lard and Shortening .....		10			2	3	15	2	2
Liquors Distilled and Fermented .....	1	1			3		5		1
Meat and Meat Products .....	128	227	78	64	115	388	1000	232	17
Nuts .....	476	655	39	339	430	350	2289	268	88
Oils .....	2	62	1	59	13	8	145	3	16
Pickles .....		3	1		27		31		3
Preservatives .....	4			4	15	5	28	14	5
Salad Dressings—Sandwich Spreads and other Condiments .....	35	8	1	33	31	33	141	4	36
Soup and Soup Mixes .....		3	5		3	2	13	1	5
Spices .....	113	123	1	19	44	107	407	16	33
Sugar and Substitutes .....	1	2			1	8	12	4	
Sweeteners—Artificial .....		1	1			1	3	1	1
Syrups and Molasses .....	76	153		2	19	5	255	11	20
Vegetables—Canned .....	22	18	37	33	397	1176	1683	979	17
Vegetables—Dried .....	25	13	1	3	14	27	83	3	28
Vegetables—Fresh .....						4	4		4
Vinegar .....		13		38	2	21	74	2	5
Water .....		7	9				16		1
Misc. ....			4				4		

TABLE 13  
(Food and Drug Divisions)  
ANALYTICAL WORK  
Fiscal Year 1948-49.

Sources of Samples	Laboratories						Total
	Halifax	Montrea	Ottawa	Toronto	Winnipeg	Vancouver	
(a) Inspectors of Food and Drugs—							
(1) Domestic . . . . .	1,112	1,004	344	1,329	1,698	2,503	7,990
(2) Imports . . . . .	1,400	2,292	73	1,944	2,748	3,714	12,171
(3) Examined at Customs . .	2,886	26,297	125	3,621	9,044	8,283	50,256
(b) Department of Agriculture	68	462	34	2,476	323	208	3,571
(c) Department of National Defence . . . . .			13			13	26
(d) Royal Canadian Mounted Police . . . . .	59	53	57	286	53	333	841
(e) Other Department of Government . . . . .	98	675	44	14	50	440	1,321
(f) Intradepartmental . . . .			25				25
(g) Miscellaneous . . . . .	26	2	84		18	234	364
(h) Samples sent to Ottawa . .	23	415		206	162	55	861
Totals . . . . .	5,672	31,200	799	9,876	14,096	15,783	77,426

TABLE 14  
(Food and Drug Divisions)  
DRUGS EXAMINED  
Fiscal Year 1948-49.

Laboratory at	LABORATORY EXAMINATION				Passed by Inspectors at Customs	Grand Total	Adulterated	Mis-branded
	Do-mestic	Imports	Miscellaneous	Total				
Halifax . . . . .	186	588	.....	774	2,886	3,660	41	113
Montreal . . . . .	210	824	718	1,752	15,089	16,841	115	549
Ottawa . . . . .	225	28	57	310	125	435	26	31
Toronto . . . . .	316	1,255	.....	1,571	2,146	3,717	6	442
Winnipeg . . . . .	360	1,067	.....	1,427	6,838	8,265	95	922
Vancouver . . . . .	238	1,136	.....	1,374	6,098	7,472	107	548
Total . . . . .	1,535	4,898	775	7,208	33,182	40,390	390	2,605

TABLE 15  
(Food and Drug Divisions)  
INSPECTION SERVICES  
Fiscal Year 1948-49.

	Radio		Other Advertisements		Labelling	
	English	French	Folders	Press	Labels	Cartons
Totals . . . . .	10,133	1,839	550	251	1,726	1,020

TABLE 16  
(Laboratory of Hygiene)  
SUMMARY OF SPECIMENS COLLECTED  
Year Ended March 31, 1949

Crew	Animal	Number	Fleas	Flea Pools	Tissue Pools	Ticks	
SASKATCHEWAN Dept. Public Health	—	—	—	—	—	—	
Totals.....		—	—	—	—	—	
ALBERTA Dept. Public Health	Richardson Ground Squirrel	1,123	2,352	131	168	165 host	
	Squirrels Various species	5	15	3	4		
	Mice Various species	88	26	6	29	5224 drag	
	Other animals	53	28	8	26		
	Totals.....	1,269	2,421	148	227	5,389	
BRITISH COLUMBIA	National Health and Welfare	Norway Rat <i>Rattus norveg.</i>	1,336	187	48	271	
		Black Rat <i>Rattus rattus</i>	2	—	—	2	1,032 host
		Mice Various species	66	13	4	15	
		Other animals	361	728	37	55	539 drag
		Columbian Ground Squirrel	1,521	1,877	61	60	
	Totals.....		3,286	2,805	150	403	1,571
	Vancouver Health Dept.	Norway Rat <i>Rattus norveg.</i>	1	—	—	1	
	SHIPS in B.C. Ports	National Health and Welfare	Black Rat <i>Rattus rattus.</i>	11	4	1	3
Alexandrine Rat <i>Rattus r. alex.</i>			22	—	—	1	
Norway Rat <i>Rattus norveg.</i>			4	—	—	2	
Totals.....			37	4	1	6	
British Columbia Totals.....		3,324	2,809	151	410	1,571	
GRAND TOTALS.....		4,593	5,230	299	637	6,960	

TABLE 17  
(Laboratory of Hygiene)

COMPARATIVE RESULTS OF SURVEYS  
For the Years Ended March 31, 1948, and March 31, 1949.

Province	March 31, 1947-48								Number Positive
	Ro- dents	Fleas	Flea Pools	Tissue Pools	Ticks	R.M.S.F.*	Plague	Pseudo T.B.†	
British Columbia.....	3,625	1,516	177	285	3			5	
Alberta.....	1,054	2,000	134	122	5,940	1	13		
Saskatchewan.....	446	2,687	39	11			4		

Province	March 31, 1948-49								Number Positive
	Ro- dents	Fleas	Flea Pools	Tissue Pools	Ticks	R.M.S.F.*	Plague	Pseudo T.B.†	
British Columbia.....	3,324	2,809	151	410	1,571			3	1
Alberta.....	1,269	2,421	148	227	5,389		1		1
Saskatchewan.....									

\* R.M.S.F.—Rocky Mountain Spotted Fever.

† Pseudo T.B.—*Pasteurella pseudotuberculosis rodentium*.

TABLE 18  
(Laboratory of Hygiene)

INFECTIONS ENCOUNTERED IN RATS IN B.C. COASTAL AREA

Location	Pasteurella			Spirillum minus	Total
	multocida	pseudotu- berculosis rodentium	tularensis		
Cambie Road Piggery Lulu Island	2	2*	1	6	11
West Vancouver Dump West Vancouver	—	1	—	5	6
South Side Piggery Mitchell Island	4	—	—	—	4
How Kam's Piggery Steveston	2	—	—	1	3
Musqueam Piggery Vancouver	1	—	—	1	2
Stride Avenue Dump Burnaby	—	—	—	3	3
Kerr Road Dump Vancouver	—	—	—	1	1
Ladner Dump Ladner	—	—	—	1	1
Ladner Slaughterhouse Ladner	—	—	—	1	1
S.S. Orient City, Japan, in Vancouver	—	—	—	1	1
Port Alberni Dump Port Alberni	—	—	—	1	1
Grand Total	9	3	1	21	34

TABLE 19  
(Narcotic Control Division)

CONVICTIONS UNDER THE OPIUM AND NARCOTIC DRUG ACT  
Judicial Year Ended September 30, 1948

Province	Nature of Offence					Totals
	Possession of Drugs	Selling, Offering	Transporting or Importing	Obtaining Drugs from more than one Physician	Professional cases under Section 6 of the Act	
P.E.I.						
Nova Scotia						
New Brunswick						
Quebec	20		1		1	22
Ontario	98	6				104
Manitoba	5					5
Saskatchewan	6		1	1		8
Alberta	16	1				17
Br. Columbia	93	7	2		1	103
TOTALS	238	14	4	1	2	259

TABLE 20  
(Narcotic Control Division)  
CONVICTIONS UNDER THE OPIUM AND NARCOTIC DRUG ACT  
Judicial Year Ended September 30, 1948.

Province	TOTAL CONVICTIONS		SENTENCE		RACIAL ORIGIN			TOTAL
	Male	Female	Option of a Fine	Committed without Option	British and American	New Zealand	Polish	Chinese
Prince Edward Island.....								
Nova Scotia.....								
New Brunswick.....								
Quebec.....	20	2		22	19	2*	1	22
Ontario.....	77	27		104	104			104
Manitoba.....	5	0		5	5			5
Saskatchewan.....	6	2	1	7	8			8
Alberta.....	12	5		17	17			17
British Columbia.....	78	25		103	102			103
Totals.....	198	61	1	258	255	2*	1	259

\* only one person involved but he had 2 separate convictions.

TABLE 21  
(Narcotic Control Division)AMOUNT OF NARCOTIC DRUGS SEIZED OR RECEIVED FROM ILLICIT CHANNELS  
During The Calendar Year 1948

<i>Opium:</i>		
Opium, Smoking	4 ozs.	415 grs.
Opium, Seconds (Yen Shee)		97 grs.
Raw Opium	371 lbs.	
Tincture Opium	10 ozs.	278 grs.
Tincture Camphor Compound, (Paregoric)	1 oz.	
Opium Liniment	3 ozs.	60 grs.
Opium Water	5 ozs.	60 grs.
*Decks of Smoking Opium	16	
*Decks of Opium Seconds, (Yen Shee)	1	
Tablets of Opium, (Dovers Powder)	12	
Pills of Lead and Opium Powder	134	
<i>Morphine: (Salts and Alkaloids combined).</i>		
Morphine Solution 2%		77 grs.
Liquor Morphine, (4.37 grs. Morphine per ounce)	1 oz.	
Tr. Chloroform and Morphine Co. (4.37 grs. Morphine per ounce)	3 ozs.	
Syrettes, ( $\frac{1}{2}$ gr. Morphine each)	6	
*Decks of Morphine	1	
Capsules of Morphine	17	
Tablets of Morphine	3100	
Pills of Morphine	107	
Tablets of Morphine and Atropine	357	
<i>Cocaine: (Salts and Alkaloids combined).</i>		
Cocaine		43 grs.
Tablets of Cocaine	265	
<i>Heroin: (Diacetylmorphine) (Salts and Alkaloids combined).</i>		
Capsules of Heroin	1363	
Tablets of Heroin	1246	
*Decks of Heroin	14	
<i>Codeine: (Salts and Alkaloids combined).</i>		
Codeine		55 grs.
Tablets of Codeine	13046	
Capsules of Codeine	10	
<i>Ethylmorphine: (Salts and Alkaloids combined).</i>		
Ethylmorphine		30 grs.
<i>Demerol:</i>		
Tablets of Demerol	34	32 grs.
<i>Cannabis Sativa:</i>		
Cannabis Sativa (Marihuana)	4 ozs.	328 grs.
Cannabis Sativa (Marihuana Leaves)	6 ozs.	
Cannabis Sativa (Marihuana Seed)	3 ozs.	
Cigarettes (Marihuana)	50	
<i>Alleged Drugs: (miscellaneous) including Morphine, Heroin,</i>		
<i>Cocaine and Codeine</i>		
Drugs, alleged	3 ozs.	116 grs.
Capsules, alleged drugs	138	
*Decks, alleged drugs	4	
Tablets, alleged drugs	6836	

\* Deck is a small package containing from two to five grains of drugs.

TABLE 22  
(Narcotic Control Division)  
AMOUNT OF NARCOTICS IMPORTED INTO CANADA  
Calendar Year 1948.

Unit of Weight—Ounce, Pure Drug

Country Imported from	OPIUM				MORPHINE		HEROIN		COCAINE	
	Crude	Powder	Preps. Tr. Ext. Etc.	Alkaloid of Opium Non Morph.	Str (Pure Drug)	Prep. (Pure Drug)	Str. (Pure Drug)	Prep. (Pure Drug)	Str (Pure Drug)	Prep. (Pure Drug)
Great Britain.....	3,200.00	2,080.00	960.00	1,125.00	2,820.88	19.79	1,019.00		528.47	2.36
United States.....				1,684.00	171.37	1.37			460.00	2.03
France.....										
	3,200.00	2,080.00	960.00	2,809.00	2,992.25	21.16	1,019.00		988.47	4.39

Country Imported from	ETHYLMORPHINE		CODEINE		CANNABIS SATIVA	DICODIDE	AMIDONE	METOFON	DILAUDIDE	EUCODAL	DEMEROL
	Str (Pure Drug)	Prep (Pure Drug)	Str. (Pure Drug)	Prep (Pure Drug)	Herb					Prep. (Pure Drug)	
Great Britain.....	919.00		34,058.71		488.00	93.23	892.04	18.00	25.79		5,175.00
United States.....		.84								1.35	
France.....					488.00	93.23	892.04	18.00	25.79	1.35	5,175.00
	919.00	.84	34,058.71								

TABLE 23  
(Narcotic Control Division)  
IMPORTS OF MAIN NARCOTICS  
For Period 1939-1948 Inclusive

Unit of Weight—Ounce, Pure Drug

YEAR	RAW OPIUM	MEDICINAL OPIUM AND PRE- PARATION	MORPHINE	HEROIN	COCAINE	ETHYL- MORPHINE	DILAUDIDE	PAPAVERINE	CODEINE	DEMEROL
1939.....	7,200	16,576	4,983	987	2,192	838	14	15	37,218	.....
1940.....	4,961	5,839	4,940	1,130	819	352	13	20	35,518	.....
1941.....	5,600	15,032	3,354	880	1,681	764	9	139	16,120	.....
1942.....	.....	2,088	2,865	682	1,831	147	14	122	15,291	.....
1943.....	1,344	9,390	4,360	964	2,338	844	14	46	9,777	.....
1944.....	1,056	416	5,229	468	1,233	2,131	10	354	26,149	1,211
1945.....	4,000	3,842	4,791	762	361	1,195	19	571	23,122	2,085
1946.....	4,000	4,614	1,181	1,020	1,797	664	23	805	35,885	5,539
1947.....	3,360	6,458	1,046	906	2,169	745	18	961	36,915	9,018
1948.....	3,200	3,040	3,013	1,019	993	919	26	2,809	34,058	5,175

TABLE 24  
(Narcotic Control Division)  
SUMMARY OF NARCOTIC DRUGS EXPORTED FROM CANADA  
Calendar Year 1943 (By Countries)

Unit of Weight—Ounce, Pure Drug

Country exported to	Opium contained in Tr. Ext. Pills, etc.	MORPHINE		ETHYLMORPHINE		COCAINE		CODEINE		Alkaloid of Opium Non Morph.	Indian Hemp in Gal. Preps.
		Str. (Pure Drug)	Preps. (Pure Drug)	Str. (Pure Drug)	Preps. (Pure Drug)	Str. (Pure Drug)	Preps. (Pure Drug)	Str. (Pure Drug)	Preps. (Pure Drug)		
Antigua	5.29							7.06	1.82		
Bahamas	.57	3.20	.88						13.05	1.	
Barbados									7.51		
Bermuda	.57							5.12	23.40		
British Guiana								2.80	13.56		
Greece	457.14							62.56			
Grenada									2.00		
Great Britain		161.30		13				.70			
Jamaica	9.60								10.13	.11	
Leeward Isl.									1.20		
Newfoundland	96.46	39.49	3.98			35.10		103.78	165.86		.06
St. Lucia								3.20	.80		
St. Pierre & Miquelon									.20		
Trinidad									4.43		
	569.63	203.99	4.86	.13		35.10		185.22	243.96	1.11	.06

TABLE 25  
(Quarantine Service)  
SHIPS BOARDED BY QUARANTINE OFFICERS  
1948-49

Station	Vessels Inspected	PERSONNEL INSPECTED						
		PASSENGERS				Crews	Cattlemen Stowaways Distressed Seamen Etc.	Port Totals
		First Class	Cabin and Second Class	Tourist Third	Third Class and Steerage			
Halifax, N.S.....	575	15,190	8,531	57,870	15,382	56,699	54	153,726
Saint John, N.B.....	370	771	588	45	45	17,130	175	18,763
Quebec, P.Q.....	1,122	8,793	3,076	14,221	11,882	56,942	300	95,214
William Head, B.C....	674	1,659	997	102	315	10,347	60	33,480
Totals.....	2,741	26,413	13,192	72,238	27,633	161,118	589	301,183

TABLE 26  
(Quarantine Service)  
VESSELS INSPECTED FOR DERATIZATION  
1948-49

Port	Vessels inspected, fumigated and deratization certificates issued	Vessels inspected and exemption certificates issued	Vessels inspected and time extended or certificates endorsed	Total vessels inspected for vermin	Rodents recovered	
					Rats	Mice
Halifax, N.S.....	15	57	13	85	48	.....
Sydney, N.S.....	.....	7	.....	7	.....	.....
Saint John, N.B.....	5	24	2	31	.....	.....
Port Alfred, P.Q.....	1	27	1	29	97	.....
Quebec, P.Q.....	4	18	.....	22	.....	.....
Trois-Rivieres, P.Q.....	.....	6	.....	6	.....	.....
Sorel, P.Q.....	1	19	.....	20	.....	.....
Montreal, P.Q.....	20	98	76	194	326	.....
Vancouver, B.C.....	59	101	145	305	254	.....
Victoria, including Esquimalt, B.C.....	.....	17	21	38	.....	.....
Port Alberni, B.C.....	1	2	1	4	132	.....
Totals.....	106	376	259	741	857	.....

TABLE 27  
(Immigration Medical Service)  
SUMMARY OF ACTIVITIES  
Fiscal year 1948-49

<i>Canada</i>	
Immigrants medically inspected on arrival at ocean ports	105,733
Certified as "prohibited" under Immigration Act, Sec. 3, (a), (b), (k) and (m)	191
Certified as physically defective, Sec. 3 (c)	394
Refused permanent admission	176
<i>Overseas</i> —(United Kingdom and Continent other than Occupied Territory)	
Prospective emigrants medically examined	77,377
Certified as "prohibited" under Immigration Act, Sec. 3 (a), (b), (k) and (l)	1,144
Certified as physically defective, Sec. 3 (c)	8,480
Furthered from 1947-48	592
Refused admission	2,366
<i>Continent</i> —(Occupied Territory)	
Prospective emigrants medically examined	55,045
Certified (approximately 25%)	13,750

TABLE 28  
(Immigration Medical Service)  
DETAILS OF EXAMINATIONS  
Fiscal Year 1948-49

<i>At Canadian Ports:—</i>	
Halifax, N.S.	63,374
North Sydney, N.S.	2,217
Sydney, N.S.	1,622
Dartmouth, N.S.	37
Louisburg, N.S.	16
Moncton, N.B.	67
Saint John, N.B.	603
Quebec, P.Q.	22,866
Port Alfred, P.Q.	73
Dorval, P.Q.	12,479
Montreal, P.Q.	737
Malton, Ont.	899
Vancouver, B.C.	595
Victoria, B.C.	88
Other Ports	60
Total	105,733
All figures given include rejections.	
<i>Examinations Overseas (Other than Occupied Territory)</i>	
By Canadian Medical Officers in British Isles	24,419
By Roster Doctors in British Isles	21,659
By Canadian Medical Officers on the Continent (Other than Occupied Territory)	25,636
By Roster Doctors on the Continent (Other than Occupied Territory)	5,663
Total	77,377
Re-examinations	5,675
Non-immigrants	25,788

TABLE 29  
(Immigration Medical Service)

DETAILS OF CERTIFICATIONS AND DISPOSITIONS OF CASES  
Fiscal year 1948-49  
CANADIAN PORTS

	Admitted	Deported	Pending	Totals
Section 3, s.s. (a) Mental diseases and defects. . . . .	1*	110	9	120
Section 3 s.s. (b) Loathsome diseases, including tuberculosis. . . . .	12*	24	25	61
Section 3; s.s. (c) Physical diseases and defects. . . . .	278	41	75	394
Section 3, s.s. (k) Constitutional psychopathic inferiority. . . . .		1	8	9
Section 3, s.s. (m) Minor mental and physical defects. . . . .			1	1
Totals. . . . .	291	176	118	585

\*Temporary entry

OVERSEAS

	CERTIFICATIONS					DISPOSALS		
	British Isles		Continent			Totals	Admitted	Re- fused
	Examined by Canadian Medical Officers	Examined by Roster Doctors	Unoccupied Territory		Occupied Territory			
			Examined by Canadian Medical Officers	Examined by Roster Doctors	Examined by Canadian Medical Officers			
Section 3 (a) Mental diseases and defects. . . . .	82	47	38	7	40	214	0	214
Section 3 (b) Loathsome diseases in- cluding tuberculosis. . . . .	235	224	236	103	571	1,459	2	1,457
Section 3 (c) Physical diseases and defects. . . . .	3,415	2,550	2,135	378	*6,329	14,807	12,105	2,067
Section 3 (k) Constitutional psycho- pathic inferiority. . . . .	58	14	9	0	4	85	0	85
Section 2 (l) Chronic alcoholism. . . . .	1	1	1	0	2	5	0	5
Totals. . . . .	3,881	2,836	2,419	488	6,946	16,570	12,107	3,828

\*635 Pending

TABLE 30  
(Sick Mariners' Service)  
DISEASES AND INJURIES TREATED  
Fiscal Year 1948-49

General.....	7,309
Nervous System.....	600
Eye, Ear, Nose and Throat.....	2,014
Circulatory System.....	314
Respiratory System.....	711
Gastro Intestinal.....	1,795
Lymphatic System.....	82
Genito Urinary System.....	2,172
Skin.....	2,047
Injuries.....	2,128
Fractures.....	507
Dislocations.....	81
All Others.....	805
Total.....	20,565

TABLE 31  
(Sick Mariners' Service)  
TOTAL NUMBER OF VESSELS—DUES COLLECTED AND EXPENDITURES  
Calendar Year 1948

	Number Vessels Paying Dues	Total Dues Collected	Total Number of Crew	Total Expenditure	Average Expenditure for each member of Crew
Vessels, foreign going.....	2,134	\$215,573.01	76,420	\$256,373.57	\$ 3.35
Vessels, trading continuously between Canadian Ports.....	3,278	9,170.26	12,637	129,253.45	10.23
Total.....	5,412	224,743.27	89,057	385,627.02	4.33

TABLE 32  
(Sick Mariners' Service)  
REVENUES AND EXPENDITURES BY PROVINCES  
1948-1949

Province	Revenue	Expenditure
Prince Edward Island.....	\$ 778.70	\$ 4,952.10
Nova Scotia.....	65,785.64	163,307.79
New Brunswick.....	22,170.76	91,950.44
Quebec.....	69,422.07	91,640.75
Manitoba.....	1,328.22	81.00
British Columbia.....	66,942.64	146,499.56
Totals.....	\$226,428.03	\$498,431.64

TABLE 33  
(Sick Mariners' Service)  
TREATMENT AND HOSPITALIZATION OF SICK MARINERS  
Fiscal Year 1948-1949

	Manitoba	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	British Columbia	Total
Number of Doctors on salary part time.....			11	2	2	4	19
Total Salaries.....			\$12,608.00	\$ 1,824.00	\$ 2,628.00	\$ 6,587.00	\$ 23,647.00
Total Seamen Treated.....			1,300	130	827	1,247	3,504
Total Number of Visits.....			10,107	610	1,113	11,238	23,088
Total Number sent to hospital.....			506	61	76	628	1,371
Total Number Doctors on fee basis (including Dentists).....		15	85	40	54	52	246
Total Fees Paid.....		\$1,610.65	\$28,914.21	\$ 9,165.18	\$ 9,072.98	\$ 18,624.82	\$ 67,387.84
Total Seamen Treated.....		113	2,744	1,017	868	1,681	6,423
Total Number of Visits.....		748	8,228	2,182	2,755	3,897	17,510
Total Number sent to Hospital.....		28	249	112	294	362	1,045
Doctors rendering professional assistance.....		5	76	25	24	95	225
Total Fees Paid.....		\$ 273.00	\$13,127.45	\$ 1,419.00	\$ 2,345.70	\$ 17,355.30	\$ 34,520.45
Total Number Seamen Treated.....		13	5,561	121	172	681	1,543
Hospitals treating sick mariners.....	2	6	30	19	34	32	123
Total Hospital costs.....	\$81.00	\$3,211.90	\$64,067.92	\$40,700.59	\$72,930.32	\$109,531.20	\$290,522.93
Total Ward Patients.....	1	32	806	369	708	857	2,773
Total Hospital Days.....	13	685	14,934	4,700	10,771	13,508	44,611
Total Out Patients.....	7	9	2,576	1,139	2,985	3,551	10,267
Total Out Patients Treatments.....	7	10	4,144	1,462	4,766	7,273	17,662
Private Houses used as Emergency Hospitals.....			3	1			4
Totals Costs.....			337.00	66.00			403.00
Total Seamen Treated.....			14	1			15
Total Hospital Days.....			122	66			188.00

TABLE 34  
(V.D. Control Division)  
NUMBER OF CASES OF VENEREAL DISEASE IN CANADA AS REPORTED BY PROVINCIAL HEALTH DEPARTMENTS  
TO THE DOMINION BUREAU OF STATISTICS

	1944	1945	1946	1947	1948	1947		1948			Oct.-Dec.	Jan.-Mar.	Apr.-June	July-Sept.	Oct.-Dec.
						Oct.-Dec.									
Total V.D.	38,772	40,528	41,556	33,476	27,491	8,039	7,303	6,681	6,619	6,888					
Total Syphilis	16,475	15,279	15,217	11,527	8,907	2,639	2,475	2,206	2,018	2,208					
Syphilis Primary		3,607	3,815	2,632	1,574	605	443	380	349	402					
Syphilis Secondary		2,088	2,112	1,581	970	362	293	230	194	253					
Syphilis Others		9,584	9,290	7,314	6,363	1,672	1,739	1,596	1,475	1,553					
Gonorrhoea	22,282	25,237	26,286	21,764	18,547	5,344	4,816	4,467	4,589	4,675					
Other V D.	15	12	53	185	37	56	12	8	12	5					
Ratio Gc to Syphilis I and II		4.4	4.4	5.2	7.3	5.5	6.5	7.3	8.5	7.1					
Ratio Gc to Total Syphilis	1.4	1.7	1.7	1.9	2.1	2.0	1.9	2.0	2.3	2.1					
Ratio Syphilis I and II to Total Syphilis		0.37	0.39	0.37	0.29	0.37	0.30	0.28	0.27	0.30					

TABLE 35  
(V.D. Control Division)

INCIDENCE AND RATE PER 100,000 PER ANNUM OF SYPHILIS ALL TYPES  
REPORTED BY PROVINCIAL HEALTH DEPARTMENTS TO THE DOMINION BUREAU OF STATISTICS

	1944	1945	1946	1947	1948	1947				1948			
						Oct.-Dec.				Jan.-Mar.			
<i>(Uses)</i>													
CANADA.....	16,475	15,279	15,217	11,527	8,907	2,639				2,475	2,206	2,018	2,208
Prince Edward Island.....	35	34	50	66	44	21				10	8	18	8
Nova Scotia.....	496	664	658	553	429	154				128	109	107	85
New Brunswick.....	573	413	334	303	355	69				70	64	66	155
Quebec.....	7,120	6,037	5,425	3,998	3,681	898				961	882	891	947
Ontario.....	5,365	4,930	4,807	3,283	2,299	721				580	623	524	572
Manitoba.....	663	622	679	608	482	143				133	134	102	113
Saskatchewan.....	360	411	643	469	314	126				111	78	55	70
Alberta.....	573	599	503	472	319	115				94	83	75	67
British Columbia.....	1,290	1,569	2,118	1,775	984	392				388	225	180	191
<i>(Rate)</i>													
CANADA.....	137.8	126.3	123.9	91.8	69.3	84.0				77.0	68.6	62.8	68.7
Prince Edward Island.....	38.5	37.0	53.2	70.2	47.3	91.3				43.5	34.8	78.3	34.8
Nova Scotia.....	81.0	106.9	107.5	89.0	67.6	99.4				80.5	68.6	67.3	53.5
New Brunswick.....	124.0	88.2	69.6	61.7	70.6	56.1				55.6	50.8	52.4	123.0
Quebec.....	203.4	169.5	149.4	107.7	97.1	96.8				101.4	93.0	94.0	99.9
Ontario.....	135.3	123.1	117.2	78.4	53.5	68.9				54.0	58.0	48.0	53.3
Manitoba.....	90.6	84.5	93.4	81.8	63.7	76.9				70.4	70.9	54.0	59.8
Saskatchewan.....	42.6	48.6	77.2	55.7	36.8	59.7				52.1	36.6	23.8	32.9
Alberta.....	70.0	72.5	62.6	57.4	37.7	55.8				44.3	35.4	35.4	31.6
British Columbia.....	138.4	165.3	211.2	170.0	90.9	150.2				143.2	83.0	66.4	70.5

TABLE 36  
(V.D. Control Division)

INCIDENCE AND RATE PER 100,000 PER ANNUM OF ACQUIRED SYPHILIS PRIMARY AND SECONDARY  
REPORTED BY PROVINCIAL HEALTH DEPARTMENTS TO THE DOMINION BUREAU OF STATISTICS

	1945	1946	1947	1948	1947				1948			
					1947		1948		1947		1948	
					Oct.-Dec.	Jan.-Mar.	Apr.-June	July-Sept.	Oct.-Dec.	Jan.-Mar.	Apr.-June	July-Sept.
<i>Cases</i>												
CANADA	5,695	5,927	4,213	2,544	967	736	610	543	655	736	610	543
Prince Edward Island	26	25	44	24	16	10	8	.....	6	10	8	.....
Nova Scotia	31	47	57	57	16	10	12	19	16	10	12	19
New Brunswick	200	238	187	217	44	48	40	38	91	48	40	38
Quebec	1,594	1,446	1,063	709	245	180	170	161	198	180	170	161
Ontario	2,455	2,358	1,434	795	297	219	210	175	191	219	210	175
Manitoba	295	342	273	144	70	55	31	26	32	55	31	26
Saskatchewan	220	395	308	181	87	73	40	33	35	73	40	33
Alberta	210	246	269	165	62	50	44	43	28	50	44	43
British Columbia	663	830	578	252	130	91	55	48	58	91	55	48
<i>Rate</i>												
CANADA	47.1	48.3	33.5	19.8	30.8	22.9	19.0	16.9	20.4	22.9	19.0	16.9
Prince Edward Island	29.3	26.6	46.8	25.8	69.6	43.5	34.8	.....	26.1	43.5	34.8	.....
Nova Scotia	5.0	7.7	9.2	9.0	10.3	6.3	7.5	11.9	10.1	6.3	7.5	11.9
New Brunswick	42.7	49.6	38.1	43.1	35.8	38.1	31.7	30.2	72.2	38.1	31.7	30.2
Quebec	44.8	39.8	28.6	18.7	26.4	19.0	17.9	17.0	20.9	19.0	17.9	17.0
Ontario	61.3	57.5	34.2	18.5	28.4	20.4	19.6	16.3	17.8	20.4	19.6	16.3
Manitoba	40.1	47.0	36.7	19.0	37.6	29.1	16.4	13.8	16.9	29.1	16.4	13.8
Saskatchewan	26.0	47.4	36.6	21.2	41.2	34.3	18.8	15.5	16.4	34.3	18.8	15.5
Alberta	25.4	30.6	32.7	19.5	30.1	23.6	20.8	20.3	13.2	23.6	20.8	20.3
British Columbia	69.9	82.8	55.4	23.3	49.8	33.6	20.3	17.7	21.4	33.6	20.3	17.7

TABLE 37  
 (V.D. Control Division)  
 INCIDENCE AND RATE PER 100,000 PER ANNUM OF GONORRHOEA REPORTED  
 BY PROVINCIAL HEALTH DEPARTMENTS TO THE DOMINION BUREAU OF STATISTICS

	1944	1945	1946	1947	1948	1947	1948			
						Oct.-Dec.	Jan.-Mar.	Apr.-June	July-Sept.	Oct.-Dec.
<i>Cases</i>										
CANADA	22,282	25,237	26,286	21,764	18,547	5,344	4,816	4,467	4,589	4,675
Prince Edward Island	20	42	97	116	69	24	22	18	20	9
Nova Scotia	1,663	1,176	917	816	615	184	152	143	171	149
New Brunswick	913	1,079	830	649	480	151	118	105	105	152
Quebec	4,259	5,106	5,671	5,820	5,239	1,312	1,271	1,333	1,294	1,341
Ontario	7,908	8,224	7,324	4,864	4,002	1,307	973	973	1,026	1,030
Manitoba	1,737	2,336	2,361	1,925	1,487	414	376	372	412	327
Saskatchewan	1,123	1,685	2,124	1,278	1,006	310	327	195	256	228
Alberta	1,522	1,881	2,423	2,257	2,032	565	537	501	478	516
British Columbia	3,137	3,708	4,539	4,039	3,617	1,077	1,040	827	827	923
<i>Rate</i>										
CANADA	186.3	208.5	214.0	173.3	144.2	170.2	149.8	138.9	142.7	145.4
Prince Edward Island	22.0	45.7	103.2	123.4	74.2	104.3	95.7	78.3	87.0	39.1
Nova Scotia	271.7	189.4	149.8	131.4	96.9	118.7	95.6	89.9	107.5	93.7
New Brunswick	197.6	230.6	172.9	132.2	95.4	122.8	93.7	83.3	83.3	120.6
Quebec	121.7	143.4	156.2	156.8	138.2	141.4	134.1	140.6	136.5	141.5
Ontario	199.4	205.4	178.6	116.1	93.1	124.8	90.6	90.6	95.5	95.9
Manitoba	237.3	317.4	324.8	259.1	196.4	222.6	198.9	196.8	218.0	173.0
Saskatchewan	132.7	199.4	255.0	151.8	117.8	146.9	153.5	91.5	120.2	107.0
Alberta	186.1	227.7	301.7	274.6	240.2	274.3	253.3	236.3	225.5	243.4
British Columbia	336.6	390.7	452.5	386.9	334.3	412.6	383.8	305.2	305.2	340.6

TABLE 38  
(Family Allowances Division)  
FAMILY ALLOWANCES PAYMENTS  
Fiscal Year 1948-49

Province	April	May	June	July	August	September	
Prince Edward Island . . . . .	\$ 190,046	\$ 190,109	\$ 190,665	\$ 190,880	\$ 191,357	\$ 192,536	
Nova Scotia . . . . .	1,202,776	1,206,825	1,202,073	1,204,988	1,208,875	1,210,939	
New Brunswick . . . . .	1,023,391	1,026,279	1,027,753	1,031,801	1,036,257	1,038,842	
Quebec . . . . .	7,352,757	7,365,157	7,392,938	7,399,335	7,424,594	7,440,059	
Ontario . . . . .	6,574,504	6,599,774	6,615,530	6,640,911	6,666,043	6,674,558	
Manitoba . . . . .	1,244,127	1,248,005	1,245,582	1,250,578	1,256,032	1,250,873	
Saskatchewan . . . . .	1,540,415	1,545,489	1,545,874	1,552,824	1,562,265	1,547,782	
Alberta . . . . .	1,536,338	1,542,409	1,541,394	1,551,008	1,565,643	1,559,702	
British Columbia . . . . .	1,570,163	1,577,651	1,582,303	1,598,456	1,610,243	1,609,094	
Northwest Territories and Yukon . . . . .	41,202	42,150	42,797	43,206	44,188	43,759	
Northwest Territories and Yukon Adjustments . . . . .	\$22,275,719	\$22,343,848	\$22,386,909	\$22,463,987	\$22,565,497	\$22,568,144	
National . . . . .	\$1,687	\$7,822	\$12,703	\$2,507	\$2,357	\$10,562	
	\$22,277,406	\$22,351,670	\$22,399,612	\$22,466,494	\$22,567,854	\$22,578,706	
	October	November	December	January	February	March	Total
Prince Edward Island . . . . .	192,407	191,072	192,304	190,760	192,029	192,439	\$ 2,296,604
Nova Scotia . . . . .	1,210,632	1,212,777	1,216,247	1,218,688	1,222,946	1,224,093	14,541,859
New Brunswick . . . . .	1,038,149	1,042,873	1,046,517	1,049,776	1,053,491	1,056,297	12,471,426
Quebec . . . . .	7,491,992	7,454,756	7,534,476	7,526,942	7,539,063	7,555,992	89,478,061
Ontario . . . . .	6,688,127	6,714,158	6,732,198	6,762,122	6,769,634	6,803,098	80,240,657
Manitoba . . . . .	1,252,632	1,254,630	1,253,153	1,254,721	1,259,202	1,259,377	15,028,912
Saskatchewan . . . . .	1,546,156	1,546,129	1,540,107	1,536,585	1,537,741	1,539,635	18,541,002
Alberta . . . . .	1,552,202	1,561,106	1,580,277	1,574,720	1,576,181	1,582,711	18,723,691
British Columbia . . . . .	1,614,630	1,625,920	1,634,405	1,646,823	1,654,592	1,659,147	19,383,427
Northwest Territories and Yukon . . . . .	43,802	44,063	44,651	45,312	45,328	45,478	525,936
Northwest Territories and Yukon Adjustments . . . . .	\$22,630,729	\$22,647,484	\$22,774,335	\$22,806,449	\$22,850,207	\$22,918,267	\$271,231,575
National . . . . .	1,215	4,412	8,341	6,221	2,741	15,561	76,129
	\$22,631,944	\$22,651,896	\$22,782,676	\$22,812,670	\$22,852,948	\$22,933,828	\$271,307,704

NOTE: Figures shown are gross and do not include payments subsequently cancelled or refunds received in connection with overpayments.

TABLE 39  
(Family Allowances Division)  
FAMILIES IN PAY  
Fiscal Year 1948-49

Province	April	May	June	July	August	September
Prince Edward Island	12,756	12,774	12,803	12,835	12,868	12,900
Nova Scotia	87,262	87,428	87,597	87,738	87,910	88,090
New Brunswick	68,728	68,850	69,016	69,245	69,455	69,605
Quebec	470,272	471,418	473,991	475,483	477,543	479,613
Ontario	556,881	558,795	560,718	561,915	563,661	564,978
Manitoba	100,289	100,674	100,740	100,963	101,164	101,303
Saskatchewan	114,649	114,981	115,220	115,476	115,681	115,818
Alberta	120,185	120,374	120,672	121,248	121,634	121,974
British Columbia	140,237	140,889	141,460	142,150	143,006	143,439
Northwest Territories and Yukon	3,257	3,297	3,337	3,377	3,400	3,421
National	1,674,526	1,679,480	1,685,554	1,690,430	1,696,322	1,700,841
	October	November	December	January	February	March
Prince Edward Island	12,939	12,880	12,900	12,860	12,921	12,920
Nova Scotia	88,045	88,189	88,386	88,488	88,701	88,927
New Brunswick	69,690	69,951	70,152	70,245	70,436	70,610
Quebec	481,028	480,227	483,517	484,960	486,650	488,263
Ontario	566,513	568,540	570,870	572,309	574,183	575,961
Manitoba	101,334	101,429	101,517	101,600	101,793	101,917
Saskatchewan	115,493	115,377	115,223	114,935	114,954	115,170
Alberta	121,592	122,201	123,251	123,374	123,803	124,173
British Columbia	144,185	145,009	145,536	146,388	147,189	147,630
Northwest Territories and Yukon	3,430	3,446	3,492	3,524	3,549	3,579
National	1,704,249	1,707,249	1,714,844	1,718,683	1,724,179	1,729,150

TABLE 40  
(Family Allowances Division)  
AVERAGE ALLOWANCE PER FAMILY  
March, 1949

Prince Edward Island . . . . .	\$14.89
Nova Scotia . . . . .	13.76
New Brunswick . . . . .	14.96
Quebec . . . . .	15.47
Ontario . . . . .	11.81
Manitoba . . . . .	12.36
Saskatchewan . . . . .	13.37
Alberta . . . . .	12.75
British Columbia . . . . .	11.24
Northwest Territories and Yukon . . . . .	12.71
NATIONAL . . . . .	13.25

TABLE 41  
(Family Allowances Division)  
CHILDREN IN PAY  
Fiscal Year 1948-49

Province	Apr.	May	June	July	Aug	Sept.
Prince Edward Island . . . . .	31,904	32,123	32,032	32,122	32,184	32,267
Nova Scotia . . . . .	202,318	202,788	203,154	203,774	204,284	204,774
New Brunswick . . . . .	175,934	176,406	176,758	177,413	178,046	178,558
Quebec . . . . .	1,264,276	1,266,597	1,269,567	1,272,672	1,276,423	1,278,061
Ontario . . . . .	1,099,088	1,103,255	1,106,187	1,109,993	1,113,782	1,116,104
Manitoba . . . . .	207,965	208,694	208,857	209,653	210,306	209,900
Saskatchewan . . . . .	257,827	258,792	258,679	259,761	260,421	258,789
Alberta . . . . .	256,489	257,694	257,583	258,594	259,831	259,553
British Columbia . . . . .	263,048	265,741	265,817	266,773	268,347	270,885
Northwest Territory and Yukon . . . . .	7,060	7,198	7,307	7,367	7,537	7,484
NATIONAL . . . . .	3,765,909	2,779,288	3,785,941	3,798,122	3,811,161	3,816,375
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Prince Edward Island . . . . .	32,344	32,279	32,511	32,317	32,511	32,621
Nova Scotia . . . . .	204,812	205,159	205,632	206,059	206,885	207,282
New Brunswick . . . . .	178,611	179,330	180,076	180,580	181,347	181,921
Quebec . . . . .	1,282,969	1,281,879	1,288,917	1,293,692	1,297,811	1,302,242
Ontario . . . . .	1,118,963	1,123,205	1,127,130	1,130,944	1,136,104	1,140,778
Manitoba . . . . .	210,065	210,368	210,564	210,894	211,529	211,752
Saskatchewan . . . . .	258,488	258,239	257,751	257,913	257,981	258,370
Alberta . . . . .	258,450	258,548	261,392	262,057	262,807	266,133
British Columbia . . . . .	273,180	274,054	274,636	276,755	278,546	279,769
Northwest Territories and Yukon . . . . .	7,474	7,505	7,624	7,702	7,747	7,785
NATIONAL . . . . .	3,825,356	3,830,566	3,846,233	3,859,913	3,873,268	3,888,653

TABLE 42  
(Family Allowances Division)  
AVERAGE ALLOWANCE PER CHILD  
March, 1949

Prince Edward Island . . . . .	\$5.90
Nova Scotia . . . . .	5.90
New Brunswick . . . . .	5.81
Quebec . . . . .	5.80
Ontario . . . . .	5.96
Manitoba . . . . .	5.95
Saskatchewan . . . . .	5.96
Alberta . . . . .	5.95
British Columbia . . . . .	5.93
Northwest Territories and Yukon . . . . .	5.84
NATIONAL . . . . .	5.89

TABLE 43  
(Family Allowances Division)  
COMPARATIVE STATEMENT OF FAMILY ALLOWANCES PAYMENTS  
Between Month of March, 1948 and Month of March, 1949

Province	March, 1948					March, 1949				
	Families in Pay		Children in Pay		Amount Paid	Families in Pay		Children in Pay		Amount Paid
	Number	Average Allowance per Family	Number	Average Allowance per Child		Number	Average Allowance per Family	Number	Average Allowance per Child	
					\$ cts.					\$ cts.
Prince Edward Island . . . . .	12,748	14 90	31,861	5 96	189,920	12,920	14 89	32,621	5 90	192,439
Nova Scotia . . . . .	87,170	13 78	202,029	5 95	1,201,713	88,927	13 76	207,282	5 90	1,224,093
New Brunswick . . . . .	68,510	14 91	175,390	5 82	1,021,368	70,610	14 96	181,921	5 81	1,056,297
Quebec . . . . .	468,680	15 66	1,260,735	5 82	7,338,682	488,263	15 47	1,302,242	5 80	7,555,992
Ontario . . . . .	555,658	11 79	1,096,779	5 97	6,551,872	575,961	11 81	1,140,778	5 96	6,803,098
Manitoba . . . . .	99,954	12 42	207,544	5 98	1,241,644	101,917	12 36	211,752	5 95	1,259,377
Saskatchewan . . . . .	114,613	13 45	257,611	5 98	1,541,271	115,170	13 37	258,370	5 96	1,539,635
Alberta . . . . .	119,739	12 78	255,848	5 98	1,530,803	124,173	12 75	266,133	5 95	1,582,711
British Columbia . . . . .	139,627	11 20	260,752	6 00	1,564,007	147,630	11 24	279,769	5 93	1,659,147
Northwest Territories and Yukon . . . . .	3,245	12 75	7,023	5 89	41,367	3,579	12 71	7,785	5 84	45,478
NATIONAL . . . . .	1,669,944	13 31	3,755,572	5 92	22,222,647	1,729,150	13 25	3,888,653	5 89	22,918,267

TABLE 44  
(Family Allowances Division)  
TRANSFER OF FAMILY ALLOWANCES ACCOUNTS BETWEEN PROVINCES  
Fiscal Year 1948-49

	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T. and Yukon	Total
<i>Transfers in:</i>											
April.....	9	72	55	161	423	157	196	230	381	15	1,639
May.....	23	81	93	248	562	107	323	179	406	17	2,039
June.....	31	115	96	341	598	237	302	302	512	24	2,558
July.....	26	99	82	295	449	227	281	327	488	21	2,295
August.....	20	97	78	253	605	223	201	274	461	21	2,233
September.....	15	113	89	211	637	230	178	331	520	23	2,347
October.....	29	136	145	318	766	240	257	318	662	29	2,900
November.....	25	157	138	99	928	292	220	417	759	18	3,053
December.....	22	110	77	586	770	220	202	456	582	22	3,047
January.....	21	112	93	285	625	232	174	391	695	23	2,651
February.....	17	77	58	217	468	181	146	281	402	26	1,873
March.....	12	80	54	209	450	121	155	213	251	15	1,560
Total .....	250	1,249	1,058	3,223	7,281	2,467	2,635	3,719	6,119	254	28,255
<i>Transfers out:</i>											
April.....	13	112	67	344	381	215	293	233	398	10	2,066
May.....	21	171	116	279	611	157	235	158	318	5	2,071
June.....	22	151	124	279	616	332	283	303	399	20	2,529
July.....	28	153	77	307	473	290	409	280	355	6	2,378
August.....	22	161	97	212	476	239	356	202	281	15	2,081
September.....	20	168	114	344	577	263	369	286	370	7	2,518
October.....	51	289	161	420	753	445	517	279	425	20	3,241
November.....	50	263	165	357	526	316	563	376	335	26	2,977
December.....	38	172	112	286	454	198	674	238	309	9	2,490
January.....	49	170	106	305	295	231	646	444	221	9	2,476
February.....	21	109	64	217	171	207	380	267	235	13	1,684
March.....	13	110	54	187	322	153	192	162	272	14	1,479
Total .....	348	2,029	1,257	3,537	5,655	3,066	4,917	3,255	3,772	154	27,990

Note: Difference of 265 accounts in transit between provinces.

TABLE 45  
(Family Allowances Division)  
CLASSIFICATION OF FAMILIES BY NUMBER OF CHILDREN, SHOWING INCREASES AND  
DECREASES IN NUMBER OF FAMILIES, WITH PERCENTAGES  
1948-49

Number of Children in Family		Number of Families as at				Increase in Number of Families over previous year as at							
		March 31, 1947		March 31, 1948		March 31, 1949		March 31, 1947		March 31, 1948		March 31, 1949	
		March 31, 1946	March 31, 1947	March 31, 1948	March 31, 1949	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1 Child	554,026	645,684	685,251	699,905	91,658	16.54	39,587	6.13	14,654	2.14			
2 Children	385,464	444,415	472,448	495,176	58,951	15.29	28,033	6.31	22,728	4.81			
3 "	207,241	231,494	238,512	254,682	24,253	11.70	7,018	3.03	16,170	6.78			
4 "	114,992	120,872	124,277	127,679	5,880	5.11	3,405	2.82	3,402	2.74			
5 "	63,676	67,024	67,602	69,298	3,348	5.26	578	.86	1,696	2.51			
6 "	37,352	38,012	37,126	38,277	660	1.77	—886	—2.33	1,151	3.10			
7 "	21,486	21,967	22,088	21,783	481	2.24	121	.55	305	1.38			
8 "	12,164	12,471	12,365	12,141	307	2.52	—106	— .85	—224	—1.81			
9 "	6,210	6,349	6,132	6,130	139	2.24	—217	—3.42	—2	— .03			
10 "	2,871	2,907	2,766	2,653	36	1.25	—141	—4.85	—113	—4.08			
11 "	1,132	1,152	991	1,038	20	1.77	—161	—13.97	47	4.74			
12 "	320	307	304	301	—13	—4.06	—3	— .98	—3	—			
13 "	106	78	67	76	—28	—26.41	—11	—14.10	9	13.43			
14 "	13	17	14	10	4	30.77	—3	—17.65	—4	—28.57			
15 "	1	2	1	1	1	100.00	—1	—50.00	0	0			

TABLE 46  
(Family Allowances Division)  
STATE OF BIRTH VERIFICATION

Province	Balance still to be verified March 31, 1948	Balance still to be verified March 31, 1949
Prince Edward Island.....	204	351
Nova Scotia.....	5,980	1 953
New Brunswick.....	12,528	3,365
Quebec.....	294,108	95,731
Ontario.....	23,052	23,709
Manitoba.....	3,212	3,911
Saskatchewan.....	2,906	3,220
Alberta.....	6,280	5,289
British Columbia.....	6,178	6,570
Northwest Territories and Yukon.....	1,054	563
TOTAL.....	355,502	144,662

Note: The balances remaining to be verified March 31, 1949, represent almost wholly births for which birth indexes are not currently available. (Quebec is an exception in that a major portion of its unverified balance is due to unavoidable delay in that province in beginning birth verification).

TABLE 47  
(Family Allowances Division)  
ACCOUNTS IN PAY THROUGH  
AGENCIES AND ADMINISTRATORS

Province	Child Placing Agencies		Administrators and Trustees	
	March 31, 1948	March 31, 1949	March 31, 1948	March 31, 1949
Prince Edward Island.....			7	3
Nova Scotia.....	753	860	87	21
New Brunswick.....	108	203	43	52
Quebec.....	2,195	2,709	55	72
Ontario.....	5,622	5,914	83	114
Manitoba.....	645	660	15	89
Saskatchewan.....	700	780	28	40
Alberta.....	567	530	54	58
British Columbia.....	1,127	1,194	3	5
Northwest Territories and Yukon.....			1	4
TOTAL.....	11,717	12,850	376	458

TABLE 48  
(Family Allowances Division)  
OVERPAYMENTS OF FAMILY ALLOWANCES  
As at March, 1949

Province	Overpayments Recoverable by Deductions		Overpayments Recoverable by Collections		Overpayments Considered Uncollectible		Total Overpayments Outstanding	
	Number of Accounts	Amount	Number of Accounts	Amount	Number of Accounts	Amount	Number of Accounts	Amount
Prince Edward Island . . . . .	18	\$ 218.00	4	\$ 95.00	—	\$ —	22	\$ 313.00
Nova Scotia . . . . .	102	3,551.00	135	4,162.00	20	563.00	257	8,276.00
New Brunswick . . . . .	67	2,640.00	156	6,239.00	35	1,850.00	258	10,719.00
Quebec . . . . .	2,070	128,163.70	2,559	173,740.79	75	7,394.60	4,704	309,299.09
Ontario . . . . .	379	22,344.00	956	35,184.56	96	3,963.00	1,431	61,491.56
Manitoba . . . . .	169	5,581.00	103	2,909.00	19	723.00	291	9,213.00
Saskatchewan . . . . .	58	2,287.00	89	3,416.40	17	505.00	164	6,208.40
Alberta . . . . .	128	3,257.00	172	4,997.00	25	2,113.65	325	10,367.65
British Columbia . . . . .	114	3,809.00	159	6,042.00	28	717.25	301	10,568.25
Northwest Territories and Yukon . . . . .	29	1,581.00	28	1,146.00	6	212.00	63	2,939.00
NATIONAL . . . . .	3,134	\$173,431.70	4,361	\$237,921.75	321	\$18,041.50	7,816	\$429,394.95

TABLE 49  
(Family Allowances Division)  
OVERPAYMENTS OF FAMILY ALLOWANCES

Province	March, 1948		March, 1949		Increase or Decrease in- Overpayments Outstanding as at March, 1949. Amount
	Total Overpayments Outstanding		Total Overpayments Outstanding		
	Number of Accounts	Amount	Number of Accounts	Amount	
Prince Edward Island.....	16	\$ 333.00	22	\$ 313.00	—\$ 20.00
Nova Scotia.....	345	9,991.00	257	8,276.00	— 1,715.00
New Brunswick.....	275	10,032.00	258	10,719.00	+ 687.00
Quebec.....	5,840	382,597.00	4,704	309,299.09	— 73,297.91
Ontario.....	1,499	55,311.00	1,431	61,491.56	+ 6,180.56
Manitoba.....	171	5,090.00	291	9,213.00	+ 4,123.00
Saskatchewan.....	178	6,090.00	164	6,208.40	+ 118.40
Alberta.....	314	11,851.00	325	10,367.65	— 1,483.35
British Columbia.....	299	10,133.00	301	10,568.25	+ 435.25
Northwest Territories and Yukon.....	45	1,863.00	63	2,939.00	+ 1,076.00
NATIONAL.....	8,982	\$493,291.00	7,816	\$429,394.95	\$63,896.05

TABLE 50  
(Family Allowances Division)  
REGIONAL OFFICES' SUMMARY  
Year Ending March 31, 1949

1. <i>Mail</i>		
Letters received during year . . . . .		1,043,661
Workday average . . . . .		3,683
Letters mailed during year . . . . .		961,088
Workday average . . . . .		3,440
2. <i>Office Interviews</i>		
Number during year . . . . .		68,669
Workday average . . . . .		236
3. <i>Registrations Received</i>		
	<i>Applicants</i>	<i>Children</i>
(a) Original (white) forms . . . . .	155,214	172,266
(b) Supplementary (blue) forms . . . . .	220,756	226,465
(c) Transfers In . . . . .	28,672	51,141
Total Registrations . . . . .	404,642	449,872
4. <i>Number of active accounts</i> . . . . .		1,743,350
5. <i>Suspended accounts at end of year</i> . . . . .		14,200
6. <i>School Attendance and Juvenile Work</i>		
(a) Number of children reported . . . . .		92,749
(b) Number of children on whose behalf allowances were discontinued:		
(i) working for wages . . . . .		24,158
(ii) unlawful absence from school . . . . .		10,658
Total . . . . .		34,816
(c) Number of children on whose behalf allowances were reinstated:		
(i) having resumed attendance at school . . . . .		6,784
(ii) having ceased to work for wages . . . . .		1,835
Total . . . . .		8,619
7. <i>Welfare Investigations Completed</i>		
(a) Through Provincial Government . . . . .		3,722
(b) Through other agencies . . . . .		1,529
(c) By Regional Office Staff . . . . .		2,151
Total . . . . .		7,402

TABLE 51  
(Old Age Pensions Division)  
NUMBER OF PENSIONERS AND PERCENTAGE OF POPULATION, BY  
PROVINCES  
Fiscal Year 1948-49

Province	Number of pensioners	*Percentage of pensioners to total population	*Percentage of pensioners to population over 70 years of age
Alberta . . . . .	14,988	1.77	45.42
British Columbia . . . . .	25,633	2.37	41.54
Manitoba . . . . .	16,110	2.13	46.16
New Brunswick . . . . .	15,412	3.06	68.50
Nova Scotia . . . . .	18,450	2.91	54.26
Ontario . . . . .	78,413	1.82	34.26
Prince Edward Island . . . . .	2,688	2.89	43.35
Quebec . . . . .	64,366	1.70	50.96
Saskatchewan . . . . .	15,785	1.85	45.89
Northwest Territories . . . . .	20	.17	10.93
Canada . . . . .	251,865	1.96	43.27

\*Percentages based on the estimated population as at June 1, 1948—Dominion Bureau of Statistics.

TABLE 52  
(Old Age Pensions Division)

TOTAL PAYMENTS AND AVERAGE MONTHLY PAYMENTS, BY PROVINCES  
Fiscal Year 1948-49

Province	Average Monthly Pension	Dominion's Payments for Fiscal Year 1948-49	Dominion's Payments since Inception of Act
Alberta .....	\$29.49	\$ 3,840,154.69	\$ 33,854,482.49
British Columbia .....	29.19	6,363,538.43	48,197,085.70
Manitoba .....	29.61	4,127,098.07	41,291,767.98
New Brunswick .....	29.12	3,960,422.20	26,756,804.27
Nova Scotia .....	28.96	4,658,579.65	35,972,325.54
Ontario .....	29.50	20,292,451.32	195,366,360.55
Prince Edward Island .....	26.36	593,070.14	3,990,172.51
Quebec .....	28.94	16,273,942.16	119,337,511.80
Saskatchewan .....	29.19	4,115,290.48	40,271,258.87
Northwest Territories .....	28.75	7,663.78	49,082.41
Total .....		\$64,232,210.92	\$545,086,852.12

TABLE 53  
(Old Age Pensions Division)

NUMBER OF BLIND PENSIONERS AND PERCENTAGE OF POPULATION, BY PROVINCES  
Fiscal Year 1948-49

Province	Number of Pensioners	*Percentage of Pensioners to total population
Alberta .....	418	.049
British Columbia .....	580	.054
Manitoba .....	503	.066
New Brunswick .....	1,000	.199
Nova Scotia .....	878	.138
Ontario .....	2,070	.048
Prince Edward Island .....	122	.131
Quebec .....	3,544	.093
Saskatchewan .....	451	.053
Northwest Territories .....	1	.008
Canada .....	9,567	.074

\*Percentages based on the estimated population as at June 1, 1948—Dominion Bureau of Statistics

TABLE 54  
(Old Age Pensions Division)

TOTAL PAYMENTS TO BLIND AND AVERAGE MONTHLY PAYMENTS, BY PROVINCES  
Fiscal Year 1948-49

Province	Average monthly pension	Dominion's payments for fiscal year 1948-49	Dominion's payments since Inception of Act
Alberta.....	\$29.84	\$ 104,681.19	\$ 568,556.85
British Columbia.....	29.15	146,888.15	801,552.07
Manitoba.....	29.68	134,299.87	810,105.98
New Brunswick.....	29.66	263,020.56	1,690,114.40
Nova Scotia.....	29.62	224,479.81	1,443,941.47
Ontario.....	29.63	564,315.33	3,588,259.31
Prince Edward Island.....	28.58	30,928.72	216,960.11
Quebec.....	29.60	939,002.14	5,593,399.35
Saskatchewan.....	29.69	124,068.34	774,248.89
Northwest Territories.....	30.00	390.00	995.00
Total...		\$2,532,074.11	\$15,488,133.43

TABLE 55  
(Physical Fitness Division)

AMOUNTS AVAILABLE FOR AND PAID TO PROVINCES  
UNDER NATIONAL PHYSICAL FITNESS ACT

Province	Amount Paid in Fiscal Year (a)					Total Payments 1944-45 to 1948-49	Amount Available 1949-50(b)
	1944-45	1945-46	1946-47	1947-48	1948-49		
	\$	\$	\$	\$	\$	\$	\$
Prince Edward Island.....			2,635		4,185	6,820	1,859
Nova Scotia.....	7,418	6,748	12,486	8,685	14,002	49,340	11,302
New Brunswick.....				2,187	6,281	8,468	8,943
Quebec.....							65,151
Ontario (c).....							74,063
Manitoba.....		2,692	7,485	7,934	5,998	24,109	14,270
Saskatchewan.....		17,045	17,546	35,092	17,521	87,203	17,521
Alberta.....		23,071	15,516	19,488	8,883	66,958	15,568
British Columbia.....	16,016		32,032	16,016	15,993	80,056	15,993
Northwest Territories.....				234	234	468	234
Yukon.....							97
Newfoundland.....							7,000
Canada.....	23,434	49,555	87,700	89,635	73,096	323,421	232,000 (d)

NOTE: Columns do not add, due to rounding.

- (a) The amount paid to a province in any year does not necessarily coincide with the amount available to it in that year, as payments in respect of previous years may be included.  
 (b) Amounts were originally calculated on the basis of distribution to nine provinces. In 1947, they were recalculated to include the Northwest Territories and Yukon.  
 (c) Ontario did not enter the programme until April, 1949.  
 (d) On entry of Newfoundland into Confederation in 1949, the annual federal grant was increased to \$232,000, in order to make provision for the new province.

TABLE 56  
(Physical Fitness Division)  
ASSISTANCE TO THE PROVINCES AND PROVINCIAL EXPENDITURES  
Under National Physical Fitness Act 1948-49

Province	Provincial Department Responsible for Administration	Date of Expiration of Current Agreement	Expenditure						
			Total		Per Capita				
			Provincial	Federal	Total	Provincial	Federal	Total	
Prince Edward Island (a)	Dept. of Education, Charlottetown	31 March 50	\$ 18,125.73 (b)	\$ 1,858.50 (b)	\$ 9,984.23 (b)	8.549	1.955	10.505	
Nova Scotia (a)	Dept. of Public Health, Halifax	31 March 50	\$ 16,225.97 (c)	\$14,001.98 (c)	\$ 30,227.95 (c)	2.246	1.938	4.184	
New Brunswick	Dept. of Education, Fredericton	31 March 52	\$ 6,250.63	\$ 6,280.65	\$ 12,561.28	1.373	1.373	2.746	
Manitoba (a)	Dept. of Health and Public Welfare, Winnipeg	31 March 50	\$ 8,522.45 (d)	\$ 7,237.93 (d)	\$ 15,760.38 (d)	1.168	0.992	2.160	
Saskatchewan (a)	Dept. of Education, Regina	31 March 53	\$ 30,999.29	\$17,520.75	\$ 48,520.04	3.460	1.955	5.415	
Alberta	Dept. of Education, Calgary	31 March 51	\$ 16,185.70	\$15,567.75 (e)	\$ 31,753.45	2.033	1.955	3.988	
British Columbia	Dept. of Education, Vancouver	31 March 50	\$ 85,606.90	\$15,993.00	\$101,599.90	10.467	1.955	12.423	
Northwest Territories	Education Div., Dept. of Mines and Resources, Ottawa	31 March 52	\$ 24,766.00 (approx.)	\$ 234.00	\$ 25,000.00 (approx.)	205.893	1.955	207.848	
Totals			\$193,467.47 (f)	\$75,894.16 (f)	\$269,361.63 (f)	4.4.4	1.732	6.146	

(a) These provinces have Provincial Fitness Councils or Committees. (b) In addition, payments in respect of the previous 15 months were paid during the current fiscal year. The federal contribution amounted to \$2,326.25. (c) Includes payment for a 15-month period. (d) Manitoba account submitted after end of fiscal year 1948-49. (e) Includes late payment of \$895.36 submitted after end of fiscal year 1948-49. (f) Figures adjusted to 12-month period.

TABLE 57  
(Information Services Division)

### HEALTH EDUCATION PUBLICATIONS AND POSTERS

(The following health education material is produced by the Department of National Health and Welfare. Periodicals are provided to their respective fields by the Department, but the majority of the other productions are supplied in quantity to provincial departments for free distribution to all interested in Canada's well-being. Except for material marked with an asterisk, and presently available only in English, all productions are obtainable in both English and French.)

#### PERIODICALS

*Canada's Health.* A column of health news for weekly newspapers.

*Canada's Health and Welfare.* Monthly magazine. 8 pp. Illustrated; containing articles on various aspects of health and welfare in Canada and abroad. A clearing house of information between federal, provincial and municipal departments and independent health, welfare and social service organizations.

*Canada's Health and Welfare Supplements.* Bimonthly. 8 pp. Illustrated in colour. Covering various facets of public health and welfare. Supplements published to date: *Cancer* (Apr. 47); *Venereal Disease* (June, 47); *Immunization* (Oct. 47); *Tuberculosis* (Nov. 47); *Fit for Tomorrow* (Physical Fitness) (Jan. 48); *Arthritis* (Mar. 48); *Mental Health* (May 48); *Family Allowances* (July 48); *Old Age Pensions* (Sep. 48); *Nutrition* (Nov. 48); *Better Health for All Canadians* (new National Health Programme) (Jan. 49); *Education for Social Work* (Mar. 49).

*Here's Health.* Cartoons with verses. Provided to weekly newspapers in matrix form.

*Industrial Health Bulletin.* Monthly 4 pp. Current developments in the industrial health field.

*Industrial Health Review.* Twice Yearly. Technical information for industrial health doctors and nurses and research workers.

*National Health Radio Service.* Daily "spots" and background information, provided to radio commentators and reporters.

*Nutrition.* 62 pp. Bulletin of the Canadian Council on Nutrition. Published as warranted with reports on developments in nutrition from federal, provincial, municipal and private nutritionists.

*Nutrition Notes.* Monthly. 8 pp. Current nutritional news.

*Press Fillers.* Daily health notes for newspapers and magazines.

*Reference Reading.* Quarterly, mimeographed. Lists of useful publications and Current articles on nutrition.

#### BOOKS AND BOOKLETS

*Air Conditioning and Heating* in relation to health. 24 pp. Deals with heating, cooling, humidifying and cleansing air.

*Better Health Through Ski-ing.* †40 pp. Illustrated. Reference on ski exercises and turns, equipment, clothing, etc.

*Bon Voyage* Health hints for Canadian Travellers. 22 pp. Illustrated. Tips on keeping healthy while travelling and abroad.

*Camp Feeding.* 8 pp. Cartoons. How to buy and plan meals in quantity; how to store food; master menu pattern; list of equipment.

\**Canada's Health and Welfare Programme.* 20 pp. Describes health and welfare services provided to Canadians through federal, provincial, municipal and voluntary agencies, and by virtue of the National Health Grants.

†Also available, except in Ontario and Quebec, from the Fitness Office of the Provincial Government.

- \**Canadian Food and Nutrition Statistics, 1935-1945.* A study of what Canadians eat in terms of nutritive value.
- Canadian Mother and Child.* ‡242 pp. Illustrated. Complete information on pre-natal care, birth, care and development of the baby, correct clothing, recipes, birth registration, first aid, etc.
- Care of the Feet.* 11 pp. Illustrated. Misconceptions about feet; their structure and function; good and poor feet; muscular control; exercises; massage; footwear; foot care.
- Daily Does It.* †24 pp. Line illustrations. Exercises for men and women.
- Eyestrain—Its Cause and Treatment.* 16 pp. Artificial light; effects of poor illumination; ocular defects; binocular vision; errors of refraction, etc.
- Family Allowances. A Children's Charter.* §16 pp. Illustrated. Complete information on family allowances.
- Guide for Leaders in Community Recreation.* †32 pp. Illustrated. Basic principles of organizing a community recreation programme, activities, sources of information, etc. For class use in leadership training.
- Healthful Eating.* 56 pp. Illustrated. Describing Canada's Food Rules, how and why to follow them; how to plan menus for different members of the family; how to buy, store and prepare food; how to compute food values; where to find additional information on nutrition.
- If You Serve Food.* 8 pp. Cartoon illustrations. Hints for commercial food handlers on choice and preparation of meals; hygiene and cleanliness.
- Into the Shadows.* Blindness—Causes, Prevention, Treatment. 20 pp. Illustrated.
- Noise and Vibration Control.* 16 pp. Problems, including the effect on health of noise and vibration in industry and business.
- Posture's Important—When You're Very Young.* 24 pp. Illustrated. Describes the importance of posture in children and gives instruction for games and play exercises.
- Pure Food-Safe Drugs.* #36 pp. Illustrated. Outline of services administering the Food and Drugs Act; laboratory and inspection work; regulations governing food, drugs and medicinal preparations; how to report impure products; control of advertising and labelling, etc.
- \**Report on Nutrition and the Production and Distribution of Food.* △205 pp. Detailed study, for specialists, of food economics and physiology. Deals with malnutrition, food supply and surpluses, marketing and distribution, relative importance of food groups, wartime experience in nutrition and food management, consumer protection and suggested techniques for maintenance or improvement of existing consumption levels.
- Rural Waters.* 12 pp. Illustrated. Facts about water safety in the country. Contains simple plan of home water filter and directions for disinfecting water.
- Save Your Eyes.* 8 pp. Illustrated. Hints on care of the eyes and protection of sight.
- Skin Diseases in Industry.* 10 pp. Illustrated. How skin diseases occur, particularly in industry; materials causing skin irritation; what to do about it; prevention.
- A Trip to the Dentist with the Robertson Family.* 8 pp. Illustrated. Picture story of dental care, for children.
- Victory Over Disease.* 12 pp. Illustrated. Popular presentation of facts about venereal disease.
- What You Should Know About Tuberculosis.* 24 pp. Published by the Canadian Tuberculosis Association. The Patient's questions answered.
- Your Baby's Teeth.* 20 pp. Illustrated. Facts, in story form, of dental care; part played by nutrition; the dentist; brushing the teeth; pre-natal care.

†Also available, except in Ontario and Quebec, from the Fitness Office of the Provincial Government.

‡Not available from the Ontario Department of Health. Distributed in Ontario by the Department of National Health and Welfare, Ottawa.

§Also available from the Regional Director of Family Allowances in each Provincial Capital.

#Distributed by Regional Directors of the Food and Drug Divisions, Department of National Health and Welfare at Halifax, Montreal, Toronto, Winnipeg and Vancouver; and by the Department at Ottawa.

△Available only from the King's Printer, Ottawa, for \$1.00

## LEAFLETS AND FOLDERS

*Canada's Food Rules.* Single leaf, 4" x 6".

*Child Training.* Double folders. Illustrated.  $8\frac{1}{2}$ " x  $3\frac{3}{4}$ ", on:

*Bed-Wetting*; How can I correct my child's habit?

*Fear*; What makes my child nervous and afraid?

*Feeding Habits*; How can I guide my child's eating?

*Nervous Habits*; What causes them in my child?

*Obedience*; How can I teach my child to obey?

*Sex*; What should I tell my child?

*Temper*; How can I control my child's outbursts?

*Thumb-Sucking*; What makes my child do it?

*Lying and Stealing*; What makes my child dishonest?

*Fitness Through Recreation.* †Double folder, 4" x 8". Describes briefly three films on aims and objects of recreation; *Fit for Tomorrow*; *Fitness is a Family Affair* and *When All the People Play*.

*Good Red Blood.* Triple folder, 9" x  $3\frac{7}{8}$ ". Menus and recipes for diets high in iron content, to protect against anaemia.

*Health Care in Canada.* Double folder, bilingual,  $9\frac{1}{2}$ " x  $3\frac{3}{4}$ ". Explanation for immigrants of health care facilities in Canada.

*Healthful Living.* Double folder,  $6\frac{1}{4}$ " x  $3\frac{3}{4}$ ". Dental care for children.

*Let's Talk Food, Mother.* Double folder, 4" x  $9\frac{1}{4}$ ". Dietary needs of children at various ages (pre-school, school luncheon and teen-ager).

*The Lunch Box on the March.* Double folder, 4" x 9". Ideas on planning and packing the lunch box.

*Make Every Day Vitamin D Day.* Folder,  $5\frac{1}{2}$ " x  $8\frac{1}{2}$ ". Information on the importance and need of Vitamin D to protect against Rickets.

*Mother, the School Lunch.* Double folder, 4" x 9". Menus and hints for the preparation of school lunches.

*National Aquatic Standards.* †Quadruple folder.  $5\frac{7}{8}$ " x  $8\frac{3}{4}$ ". Details of swimming, water safety and life saving standards as approved by the National Council on Physical Fitness.

*Polio.* Double folder,  $4\frac{1}{2}$ " x  $8\frac{3}{4}$ ". Facts about infantile paralysis.

*Prescription for Smiles that Last.* Double folder,  $3\frac{1}{4}$ " x  $6\frac{1}{4}$ ". Stresses importance of dental care for children.

*Stanley Takes a Trip.* Double folder, 6" x  $4\frac{1}{2}$ ". Basic nutrition. This leaflet is a companion-piece to the animated cartoon film of the same name.

*Ten Points to Remember: Before and After Baby Comes.* Double folder,  $3\frac{5}{8}$ " x  $7\frac{1}{2}$ ". Pre-natal and infant care.

*Whooping Cough is a Baby Killer.* Double folder,  $3\frac{3}{4}$ " x  $6\frac{1}{2}$ ". Facts about whooping cough and the need for immunization.

*Your Child's Teeth.* Double folder, 4" x  $7\frac{3}{4}$ ". Dental care for children.

## POSTERS

*Canada's Food Rules.* 24" x 36".

\**Civil Service Health*—set of two-colour cartoons,  $12\frac{1}{2}$ " x 16", on:

*Reach for Better Health: Keep Clean;*

*Don't Let a Kachoo Catch You;*

*You Gamble—Squandering Sick Leave;*

*Let's Keep Our Washrooms Clean;*

*Don't Be a Dope—Out All Night, Half Asleep All Day;*

*Don't Grouch About It—Do Something!*

*Eat Right—Score High.* 16" square. Three-colour "target" design, on nutrition.

*Eat Vegetables Every Day.* 20" x 23".

†Also available, except in Ontario and Quebec, from the Fitness Office of the Provincial government.

\**Eskimo Parents—Family Allowances are for Your Children.* §18" x 25", three colours; explaining what goods may be bought with Family Allowances cheques by Eskimos. (Half of these posters are in English; half in Eskimo syllabics).

*From First to Last Guard Your Teeth,* 12¼" x 16¼", two-colour cartoon.

\**Get the Most Value from the Food You Buy with Your Family Allowances.* 41" x 19¾". Two colours. May be cut into three separate posters or mounted on cardboard to make a three-panel display.

*Growing? Vitamin D Helps Growth, Teeth, Bones.* Four colours; three sizes 6¾" x 10", 14¼" x 21", 23" x 34".

*A Guide to Good Health,* 10" x 14". Identifies the local health unit of the Civil Service Health Division of the Department.

*Health is Earning Power.* A series of posters, 18" x 23", three colours, on industrial health, entitled—

*Mild Recreation Each Day Promotes Health and Efficiency;*

*Ask Your Plant Nurse for Health Information;*

*For Tired Feet;*

*Avoid Skin Diseases;*

*Dirt Spreads Disease.*

\**Here's a Way to Keep Well.* A series of posters, 12" x 18", multi-coloured, for Indian Health Services, entitled—

*Help the Services Keep You Well;*

*Keep Yourself Clean—and Get Rid of Rats and Lice;*

*Get the Protection of Vaccination;*

*Keep Away from Sick People.*

\**Indian Parents: Family Allowances are for Your Children.* §18" x 29", three colours. Explaining what goods may be bought with Family Allowances cheques by reserve Indians.

*Industrial Health series.* 11" x 15½", multi-coloured, cartoon style, entitled—  
*General Health, H.W.M. (Happy Working Man);*

*A Clean Plant is a Healthy Plant.*

*Nutrition;* a set of three colourful posters, 15" x 21", entitled—

*Eat a Good Breakfast;*

*Eat a Good Lunch;*

*For Your Third Meal.*

## MISCELLANEOUS

*All Aboard the Good Lunch Train.* 7¼" x 9". Chart on which children can compute scores for good nutrition.

*Canada's Food Rules.* Street car pads.

*Daily Diet for Mothers.* Pin-up Cards, 5½" x 7½", listing the basic rules of pre-natal diet.

*Meal Planning for Health.* Kitchen wall charts, 10¼" x 14", based on Canada's Food Rules.

*Score Sheet for Each Day's Meals.* Charts, 8½" x 11", on which children can compute weekly scores for good nutrition.

\**Venereal Disease Blotters,* set of six blotters, carrying art and text on the subject of venereal disease.

*Work of the Department of National Health and Welfare.* A series of mimeographed copies of speeches describing in detail activities of various health and welfare services.

TABLE 58  
(Information Services Division)

### HEALTH EDUCATION FILMS AND FILMSTRIPS

(The following are current and pending screen productions of the Department of National Health and Welfare made, except where otherwise noted, through the National Film Board of Canada. Those still to be released are marked with an asterisk. Films are available for preview or purchase from the National Film Board, or on loan, for a small handling charge, from the National Film Society of Canada. Filmstrips are provided to Provincial Departments of Health and others interested may obtain them for preview from the National Film Board's Preview Service, Ottawa).

*\*Cancer.* (Working title only). Twenty minutes; sound; colour; English and French.

Will emphasize problems associated with cancer research. Special attention is to be given to techniques employed and the immensity of the field to be covered in understanding the fundamental nature of cell growth, particularly cancer cells. *Condition Improved.* Thirty minutes; sound; black and white; English. Produced in conjunction with the Department of Veterans Affairs.

Portrays the role of occupational therapy in rehabilitation of patients, particularly war casualties, accident victims and children suffering from polio and cardiac spastic conditions. Indicates need for cooperation between therapist and psychiatrist in treatment of psychoneurosis.

*The Daily D.* (Filmstrip). Colour; 40 frames; English and French; silent; captions.

Detailed information for adults on Vitamin D, its necessity in preventing rickets and the deformed bones which lead to complications in adult life, as well as the amounts in which it should be added to the diet of growing children.

*Drug Addict.* Twenty minutes; sound; black and white; English and French.

Describes the extent of the illicit drug racket in Canada, including its heavy economic toll, and describes graphically activities of the Narcotic Control Division of the Department of National Health and Welfare, of the Royal Canadian Mounted Police and other forces in dealing with the scourge.

*The Feeling of Hostility.* Twenty-seven minutes; sound; black and white; English.

One of the "Mental Mechanisms" series, designed to explain the background of personal problems; tells the story of a young woman whose feeling of being unwanted grew out of early family experience, and how she overcame this attitude.

*The Feeling of Rejection.* Twenty-one minutes; sound; black and white; English and French.

Another of the "Mental Mechanisms" films, dealing with personality factors related to emotional distress, tells the story of development of a young woman's self-confidence despite handicaps imposed by an over-sheltered childhood.

*Fit for Tomorrow.* Five minutes; sound; black and white; English.

Designed as the leader of a series dealing with the need for physical fitness and for community recreation programmes to ensure that fitness is enjoyed by all. The film outlines help available in such programmes under the National Physical Fitness Act.

*Get Rid of Rats.* Ten minutes; sound; black and white; English.

Deals with pest control in towns and cities and shows damage done by rodents, pointing out reasons for, and modern methods of, control.

*Internal Triangle.* (Filmstrip). Colour; 50 frames; silent; English and French captions.

Describes the adventures of two teen-age girls with Canada's Food Rules. Script is in rhyme, bringing out in interesting manner the adaptation of the various food groups to meal planning.

*Introducing Baby.* (Filmstrip). Colour; 51 frames; recording, four sides 12"; English and French captions.

Gives detailed information on the care of mother and child from the time baby is born until the weaning period.

*Invisible Armour.* Twenty minutes; sound; black and white; English and French.

Outlines the general principles of immunization and the need for protection of the pre-school child; a community's drive to protect its children in a spontaneous voluntary effort.

*Know Your Baby.* Eleven minutes; colour; sound; English. (Crawley Films, Ottawa).

Illustrates approved methods of psychological care of the newborn. A home situation is shown where other children are present and an indication is given of the consideration and understanding necessary until the family adjusts itself to the demands of the newcomer. The following aspects of the care of the infant are illustrated; clothing and bedding, the bath, breast-feeding and bottle-feeding, maintenance of normal home atmosphere, and avoidance of any feeling of neglect in older children.

*Let's Look at Water.* Twenty-two minutes; sound; black and white; English and French.

Describes the purification of a city's water supply. Indicates the necessity of water to all forms of life and illustrates how water may become contaminated and the source of infection. Each stage of purification in a typical modern filtration plant is shown, with the complex system of underground mains serving all parts of a city. The safeguarding of water supplies on trains, ships and planes through regular government laboratory analyses is shown. The film also gives the story of recent developments in the treatment of water supplies, including addition of fluorine as protection against tooth decay, treatment of sewage, etc.

*Mother and Her Child.* Fifty minutes; sound; colour; English and French.

Based on the book *Canadian Mother and Child*, this film covers behaviour and care during pregnancy, with a brief description of preparations for home confinement, where necessary. The need for medical attention during this period is stressed. The picture also deals with the visible and psychological development of the child from birth to the end of the first year, and gives pointers on feeding, bathing and clothing the child.

*Nine to get Ready.* (Filmstrip). 54 frames; Colour; recording three sides 12"; English and French.

Covers the essential points in pre-natal care to ensure the best start in life for babies; stresses importance of regular visits to the doctor, complete physical check-up, proper diet and exercise during the nine months of pregnancy. Warns against risks of infection and gives practical hints on maintaining cheerful outlook during this period.

*Out Beyond Town.* Ten minutes; sound; black and white; English.

Illustrates sound sanitation practice in rural areas, emphasizing the need for cleanliness of food, milk supply, water sources, privies, farm homes and rural schools.

*Over-Dependency.* 32 minutes; sound; black and white; English and French.

Third in the "Mental Mechanisms" series, this picture presents a powerful story of adult problems of a young man who had been pampered in his youth, but who is assisted by the advice of an understanding wife and their psychiatrist.

*Peppo* (Filmstrip). Colour; 76 frames; recording two sides 12"; English and French.

Demonstrates, in cartoon colour technique, how a family can spend its Family Allowances cheque wisely to provide a healthy diet essential to growing children. Shows how various food elements can be combined to form a balanced diet.

*Protection Against V.D.* (Filmstrip). Black and white; 16 frames; English and French captions.

Designed for continuous projection machines as well as for filmstrip projectors, this strip points up the salient facts about venereal disease.

\**Restaurant Sanitation.* (Working title), Two reels; sound; black and white; English and French.

This is designed to illustrate the important role a restaurant plays in public health. It will emphasize the need for care in food handling, cleanliness of premises as well as of staff and constant check to maintain food purity.

*Rural Health.* 18 minutes; sound; black and white; English and French; Produced in conjunction with the Province of Manitoba.

Tells the story of the first health unit in Manitoba, and deals with preventive medicine as applied to rural communities, stressing the need for planned rural health programmes.

*Rural School Lunches.* (Filmstrip). Fifty-six frames; silent; black and white; English and French (Script available).

Describes means by which parents and teachers can cooperate to ensure that school children are properly fed at lunch time. Gives practical suggestions for use of teachers and mothers in connection with preparation of lunches and group plans for noon feeding.

*Sixteen to Twenty-Six.* Eighteen minutes; sound; colour or black and white; English and French.

Designed for female audiences, this film presents facts about the extent, transmission, course of infection, symptoms and treatment of venereal diseases. Presented as an informal lecture by a physician, it emphasizes the extent of V.D. and discusses the means taken to treat these diseases.

*Small Fry.* Eleven minutes; sound; black and white; English and French.

An illustration of provisions being made for the welfare of Canada's children, this film points up improvement in diet, educational opportunity and better environment apparent since Family Allowances have been made.

*Something to Chew On.* Twenty minutes; sound; colour; English. (Shelly Films, Toronto).

A film for parents, showing the correct method for the care of children's teeth. Stress is laid on the importance of early training and proper diet for the development of healthy teeth. Examples of lack of proper care are given and the film suggests services needed in a modern community for the proper care and treatment of children's teeth.

*Stanley Takes a Trip.* Twenty minutes; colour cartoon; sound; English and French.

Designed primarily for children, this film uses cartoon technique to explain the proper foods, and illustrates their various parts in balanced diet.

*Very Dangerous.* Seventeen minutes; sound; colour or black and white; English and French.

Designed for male audiences, this film presents facts about extent, transmission, course of infection, symptoms and proper treatment of the venereal diseases. Presented as an informal lecture by a physician, it emphasizes the need for professional treatment.

*Vitamin D.* Five minutes; sound; black and white; English and French.

A film for all ages, describing the importance of Vitamin D for children throughout their growing years, the danger of rickets and sources of Vitamin D.

*The Vitamin Fair.* (Filmstrip). Colour; 30 frames; English and French; silent; captions. Colourful presentation of the importance of Vitamin D, using a Fair as a background, including a visit to the "House of Mirrors" where deformities due to lack of Vitamin D are pictured. Captions are in rhymed couplets.

*What's On Your Mind.* Ten minutes; sound; black and white; English.

Indicates some of the ill-effects of modern living on the mental health of individuals, describes progress which science has made in treatment of mental illness and exposes some of the current fads and quack practices.

*Why Eat?* (Filmstrips). A series of six; about 32 frames each; colour; English and French captions.

Dealing with nutrition, these are designed for children and tell their story in rhyming couplets under the titles *Why We Eat Milk*; *Why We Eat Fruit*; *Why We Eat Vegetables*; *Why We Eat Cereals*; *Why We Eat Meat*, and, simply, *Why Eat?*

*Your Morning Milk.* Twenty minutes; sound; black and white; English and French.

Directed at both producers and consumers, this stresses the importance of proper handling of milk, from herd to kitchen and tells the story of pasteurization.

TABLE 59  
(Personnel Division)

TOTAL PERMANENT AND TEMPORARY STAFF OF THE DEPARTMENT  
As at March 31, 1949

	Permanent	Temporary	Total
<b>DEPARTMENTAL ADMINISTRATION—</b>			
Minister's Office.....	10	9	19
Departmental Secretary's Division.....	24	64	88
Information Services Division.....	10	18	28
Legal Division.....	3	1	4
Library Division.....	2	8	10
Personnel Division.....	8	34	42
Purchasing and Supply Division.....	6	23	29
Research and Statistics Division.....	4	17	21
Total.....	67	174	241
<b>HEALTH BRANCH—</b>			
Health Administration.....	9	4	13
Blindness Control Division.....	3	2	5
Child and Maternal Health Division.....	3	3	6
Civil Aviation Medicine Division.....	0	3	0
Civil Service Health Division.....	12	47	59
Dental Health Division.....	1	4	5
Epidemiology Division.....	0	5	5
Food and Drug Divisions (including Inspection Services and Proprietary or Patent Medicines).....	67	91	158
Health Insurance Studies, Directorate of.....	3	6	9
Hospital Design Division.....	2	1	3
Indian Health Services Division.....	80	766	846
Industrial Health Division.....	7	8	15
Laboratory of Hygiene Division.....	24	55	79
Mental Health Division.....	2	2	4
Narcotic Control Division.....	14	17	31
Nutrition Division.....	1	30	31
Public Health Engineering Division.....	10	18	28
Quarantine, Immigration Medical and Treatment of Sick Mariners Division.....	94	238	332
Veneral Disease Control Division.....	3	6	9
Total.....	335	1306	1641
<b>WELFARE BRANCH—</b>			
Welfare Administration.....	4	1	5
Family Allowances Division.....	144	574	718
Old Age Pensions Division.....	12	1	13
Physical Fitness Division.....	2	7	9
Voluntary War Relief Division.....	0	1	1
War Charities Division.....	0	2	2
Total.....	162	586	748
Grand Total.....	564	2066	2630

NOTE:—

- (a) At the end of the fiscal year, 29 persons were employed on a casual hourly rate basis in the Family Allowances Division of the Welfare Branch.
- (b) At the end of the fiscal year 98 persons were employed on a casual hourly rate basis in the Indian Health Services of the Health Branch.

TABLE 60  
(Chief Treasury Officer)  
STATEMENT OF EXPENDITURES  
As at March 31, 1949

Vote No.	Name of Vote	Allotments	Net Expenditure	Commitments forwarded to 1949-50
Statute	Minister's Salary and Motor Car Allowance.....	\$ 12,000.00	\$ 12,000.00	
	Miscellaneous Gratuities.....	3,511.00	3,511.00	
	Family Allowances Payments.....	270,909,778.66	270,909,778.66	
	Old Age Pensions (including Pensions to the Blind) Payments.....	66,764,285.03	66,764,285.03	
	Total.....	\$337,689,574.69	\$337,689,574.69	
Vote 245	DEPARTMENTAL ADMINISTRATION			
782	Salaries.....	\$ 477,537.00	\$ 477,495.95	
	Allowances.....	190.00	60.00	
	Freight, Cartage and Express.....	800.00	676.30	
	Telephones, Telegrams and Postage.....	13,700.00	13,217.50	
	Printing, Stationery and Office Equipment.....	59,225.00	56,189.56	\$ 10,337.34
	Travelling Expenses.....	24,000.00	18,601.48	
	Educational and Informational Publicity.....	88,715.00	72,634.68	8,879.40
	Professional and Special Services.....	800.00	24.50	
	Materials and Supplies.....	4,000.00	2,494.74	32.80
	Sundries.....	7,900.00	7,591.45	304.65
	Repairs and Upkeep of Equipment.....	700.00	441.16	
	Acquisition of Equipment.....	3,500.00	2,543.15	245.00
	Allowances and Other Expenses of Delegates to International Conferences.....	10,000.00	5,689.76	
		\$891,067.00	\$657,660.23	\$19,799.19
246	HEALTH BRANCH ADMINISTRATION			
783	Salaries.....	\$ 54,053.00	\$ 49,634.41	
	Allowances.....	20.00		
	Freight, Cartage and Express.....	500.00	497.81	
	Telephones, Telegrams and Postage.....	1,030.00	776.81	
	Printing, Stationery and Office Equipment.....	2,160.00	2,002.27	\$ 140.95
	Travelling Expenses.....	11,000.00	10,604.30	
	Educational and Informational Publicity.....	93,310.00	39,725.67	30,436.25
	Professional and Special Services.....	1,300.00		
	Sundries.....	3,550.00	3,546.83	
		\$ 166,893.00	\$106,788.10	\$30,577.20
247	FOOD AND DRUGS			
	Salaries.....	\$ 357,608.00	\$ 357,193.93	
	Allowances.....	60.00		
	Freight, Cartage and Express.....	1,850.00	1,846.25	
	Telephones, Telegrams and Postage.....	6,635.00	5,447.20	
	Printing, Stationery and Office Equipment.....	21,800.00	12,577.39	\$ 1,860.34
	Travelling Expenses.....	46,000.00	30,224.81	
	Educational and Informational Publicity.....	7,400.00	7,399.35	
	Professional and Special Services.....	13,000.00	8,809.22	
	Materials and Supplies.....	36,000.00	33,078.63	734.68
	Sundries.....	15,100.00	8,611.28	307.69
	Repairs and Upkeep of Equipment.....	1,000.00	776.65	115.00
	Acquisition of Equipment.....	34,500.00	32,728.27	1,445.23
		\$540,953.00	\$498,692.98	\$4,462.94

STATEMENT OF EXPENDITURES—*Con.*

Vote No.	Name of Vote	Allotments	Net Expenditure	Commitments forwarded to 1949-50
248	PROPRIETARY OR PATENT MEDICINES			
	Salaries . . . . .	\$ 20,635.00	\$ 20,593.28	
	Allowances . . . . .	20.00		
	Telegrams, Telephones and Postage . . . . .	100.00	54.03	
	Printing Stationery and Office Equipment . . . . .	850.00	608.76	\$ 32.70
	Travelling Expenses . . . . .	500.00	99.60	
	Professional and Special Services . . . . .	2,000.00	2,000.00	
	Sundries . . . . .	450.00	250.59	
		\$ 24,556.00	\$ 23,606.26	\$ 32.70
249				
784	OPIMUM AND NARCOTIC DRUGS			
	Salaries . . . . .	\$ 63,474.00	\$ 63,471.76	
	Allowances . . . . .	60.00		
	Telephones, Telegrams and Postage . . . . .	300.00	254.40	
	Printing, Stationery and Office Equipment . . . . .	1,800.00	1,711.47	\$ 27.00
	Travelling Expenses . . . . .	8,300.00	8,128.95	
	Educational and Informational Publicity . . . . .	15,675.00	15,562.63	112.25
	Professional and Special Services . . . . .	44,800.00	41,006.32	
	Sundries . . . . .	450.00	425.02	17.69
		\$134,859.00	\$130,560.55	\$ 156.94
250	QUARANTINE AND LEPROSY			
	Salaries . . . . .	\$178,589.00	\$178,589.00	
	Allotted from Vote 85, Salaries, Etc. . . . .	15,444.53	15,444.53	
	Allowances . . . . .	3,120.00	2,700.00	
	Freight, Cartage and Express . . . . .	1,000.00	454.50	
	Telephones, Telegrams and Postage . . . . .	4,500.00	4,497.95	
	Printing, Stationery and Office Equipment . . . . .	2,225.00	1,517.61	\$ 356.00
	Travelling Expenses . . . . .	6,500.00	6,033.01	
	Professional and Special Services . . . . .	15,000.00	14,589.85	
	Materials and Supplies . . . . .	18,600.00	15,213.15	2,751.98
	Sundries . . . . .	4,100.00	3,922.35	6.29
	Repairs and Upkeep of Equipment . . . . .	11,200.00	6,708.62	
	Acquisition of Equipment . . . . .	6,500.00	5,534.73	111.99
		\$266,778.53	\$255,205.20	\$3,226.26
251				
785	LABORATORY OF HYGIENE			
	Salaries . . . . .	\$192,037.00	\$173,503.00	
	Allowances . . . . .	80.00	12.00	
	Freight, Cartage and Express . . . . .	1,600.00	807.92	
	Telephones, Telegrams and Postage . . . . .	850.00	845.74	
	Printing, Stationery and Office Equipment . . . . .	3,840.00	2,470.73	\$1,305.22
	Travelling Expenses . . . . .	11,000.00	10,177.05	
	Professional and Special Services . . . . .	1,000.00	257.80	
	Materials and Supplies . . . . .	52,000.00	47,990.37	3,178.44
	Sundries . . . . .	3,400.00	3,366.42	
	Repairs and Upkeep of Equipment . . . . .	2,250.00	2,211.09	
	Acquisition of Equipment . . . . .	36,650.00	30,706.22	178.86
		\$304,707.00	\$272,348.34	\$4,622.52

STATEMENT OF EXPENDITURES—*Con.*

Vote No.	Name of Vote	Allotments	Net Expenditure	Commitments forwarded to 1949-50
252 786	IMMIGRATION MEDICAL INSPECTION, including Mtce. of Non/Resident SEAMEN			
	Salaries	\$468,024.00	\$465,019.10	
	Allowances	89,660.00	88,848.02	
	Freight, Cartage and Express	750.00	594.28	
	Telephones, Telegrams and Postage	5,000.00	4,495.94	
	Printing, Stationery and Office Equipment	14,200.00	13,468.12	\$ 45.72
	Travelling Expenses	69,350.00	51,091.47	
	Professional and Special Services	17,125.00	17,097.00	
	Materials and Supplies	98,000.00	96,558.20	819.92
	Sundries	16,325.00	16,305.51	
	Rents	6,450.00	6,393.46	
	Repairs and Upkeep of Buildings, Works and Structures	2,500.00	2,398.84	
	Repairs and Upkeep of Equipment	2,000.00	1,190.17	
	Acquisition of Equipment	12,190.00	9,910.94	45.40
	Mtce. of Non-Resident Seamen incapacitated during the War	7,000.00	5,905.02	
		\$808,574.00	\$779,279.07	\$ 912.04
253 787	CHILD AND MATERNAL HEALTH			
	Salaries	\$ 26,640.00	\$ 23,819.52	
	Allowances	75.00		
	Freight, Cartage and Express	2,200.00	2,200.00	
	Printing, Stationery and Office Equipment	1,800.00	523.56	\$ 3.25
	Travelling Expenses	10,000.00	7,770.26	
	Educational and Informational Publicity	30,500.00	24,640.54	5,584.20
	Professional and Special Services	600.00		
	Sundries	900.00	329.42	
		\$ 72,715.00	\$ 59,283.30	\$5,587.45
254	PUBLIC HEALTH ENGINEERING			
	Salaries	\$ 82,652.00	\$ 81,888.46	
	Allowances	40.00		
	Freight, Cartage and Express	1,400.00	1,079.77	
	Telephones, Telegrams and Postage	2,000.00	1,425.82	
	Printing, Stationery and Office Equipment	5,000.00	2,074.65	\$ 100.89
	Travelling Expenses	34,600.00	17,862.36	
	Educational and Informational Publicity	6,500.00	3,648.14	1,351.86
	Professional and Special Services	4,000.00	2,601.93	
	Materials and Supplies	7,600.00	4,481.11	184.90
	Sundries	3,500.00	1,369.57	30.54
	Repairs and Upkeep of Equipment	2,000.00	502.02	
	Acquisition of Equipment	12,000.00	10,495.83	123.77
		\$161,292.00	\$127,429.65	\$1,791.96
255 788	TREATMENT OF SICK MARINERS			
	Salaries	\$ 62,836.00	\$ 62,488.26	
	Allowances	120.00	100.00	
	Freight, Cartage and Express	500.00	448.21	
	Telephones, Telegrams and Postage	800.00	656.78	
	Printing, Stationery and Office Equipment	3,000.00	1,484.12	\$ 205.90
	Travelling Expenses	2,000.00	1,947.12	
	Professional and Special Services	400,000.00	363,207.17	
	Materials and Supplies	40,000.00	39,741.73	67.05
	Sundries	2,800.00	2,178.78	
	Rents	2,400.00	390.00	
	Repairs and Upkeep of Buildings, Works and Structures	1,500.00	12.00	
	Repairs and Upkeep of Equipment	300.00	44.85	
	Acquisition of Equipment	2,400.00	1,592.58	81.00
		\$518,656.00	\$474,291.60	\$ 353.95

## STATEMENT OF EXPENDITURES—Con.

Vote No.	Name of Vote	Allotments	Net Expenditure	Commitments forwarded to 1949-50
256 789	INDUSTRIAL HEALTH			
	Salaries . . . . .	\$ 53,833.00	\$ 52,977.00	
	Allowances . . . . .	25.00		
	Freight, Cartage and Express . . . . .	350.00	312.77	
	Telephones, Telegrams and Postage . . . . .	300.00	278.85	
	Printing, Stationery and Office Equipment . . . . .	3,546.00	1,551.75	\$ 102.66
	Travelling Expenses . . . . .	7,900.00	5,300.17	
	Educational and Informational Publicity . . . . .	23,850.00	12,193.07	10,347.78
	Professional and Special Services . . . . .	1,000.00	295.81	
	Materials and Supplies . . . . .	8,657.00	6,052.04	87.65
	Sundries . . . . .	1,487.00	459.26	11.26
	Repairs and Upkeep of Equipment . . . . .	500.00	205.04	
	Acquisition of Equipment . . . . .	13,813.00	10,314.27	219.00
		\$115,261.00	\$ 89,940.03	\$10,768.35
257	CIVIL SERVICE HEALTH			
	Salaries . . . . .	\$159,345.00	\$145,375.91	
	Allowances . . . . .	60.00		
	Freight, Cartage and Express . . . . .	400.00	34.46	
	Telephones, Telegrams and Postage . . . . .	1,250.00	43.37	
	Printing, Stationery and Office Equipment . . . . .	6,000.00	4,443.27	\$ 842.69
	Travelling Expenses . . . . .	4,500.00	2,726.75	
	Educational and Informational Publicity . . . . .	7,500.00	2,170.58	500.00
	Professional and Special Services . . . . .	4,500.00	2,257.00	
	Materials and Supplies . . . . .	10,000.00	6,165.17	381.00
	Sundries . . . . .	4,400.00	2,278.89	28.25
	Repairs and Upkeep of Equipment . . . . .	825.00	756.20	
	Acquisition of Equipment . . . . .	13,850.00	4,137.68	1,160.00
		\$212,630.00	\$170,389.28	\$2,911.94
258	NUTRITION			
	Salaries . . . . .	\$ 73,881.00	\$ 70,842.63	
	Allowances . . . . .	135.00		
	Freight, Cartage and Express . . . . .	1,500.00	1,499.28	
	Telephones, Telegrams and Postage . . . . .	200.00	76.99	
	Printing, Stationery and Office Equipment . . . . .	3,500.00	2,188.78	\$ 75.11
	Travelling Expenses . . . . .	15,300.00	13,736.01	
	Educational and Informational Publicity . . . . .	49,100.00	40,348.48	4,634.79
	Professional and Special Services . . . . .	1,500.00	965.30	
	Materials and Supplies . . . . .	1,500.00	1,399.13	31.44
	Sundries . . . . .	1,200.00	687.64	3.48
	Repairs and Upkeep of Equipment . . . . .	100.00	3.50	
	Acquisition of Equipment . . . . .	2,900.00	2,856.59	
		\$150,816.00	\$134,604.33	\$4,744.82
259 790	COMBATING VENEREAL DISEASES— ADMINISTRATION—			
	Salaries . . . . .	\$ 27,888.00	\$ 26,472.05	
	Allowances . . . . .	175.00	72.00	
	Freight, Cartage and Express . . . . .	200.00	176.65	
	Telephones, Telegrams and Postage . . . . .	300.00	297.95	
	Printing, Stationery and Office Equipment . . . . .	1,150.00	614.94	\$ 6.25
	Travelling Expenses . . . . .	4,500.00	4,177.65	
	Educational and Informational Publicity . . . . .	2,550.00	1,773.19	
	Sundries . . . . .	1,800.00	1,777.63	
		\$ 38,563.00	\$ 35,362.06	\$ 6.25

## ANNUAL REPORT

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## STATEMENT OF EXPENDITURES—Con.

Vote No.	Name of Vote	Allotments	Net Expenditure	Commitments forwarded to 1949-50
260 791	ASSISTANCE TO PROVINCES for Control of Venereal Diseases under regulations approved by the Governor in Council .....	\$178,069.00	\$176,266.24	
261	DISTRIBUTION OF DRUGS under regulations approved by the Governor in Council .....	\$ 50,000.00	\$ 49,939.42	
262 792	HEALTH INSURANCE STUDIES			
	Salaries .....	\$ 28,247.00	\$ 16,388.48	
	Telephones, Telegrams and Postage ..	600.00	588.99	
	Printing, Stationery and Office Equipment .....	5,000.00	879.67	\$45.45
	Travelling Expenses .....	7,500.00	2,587.30	
	Professional and Special Services .....	2,000.00		
	Sundries .....	550.00	56.11	
		\$ 43,897.00	\$ 20,500.55	\$45.45
263	DENTAL HEALTH			
	Salaries .....	\$ 16,568.00	\$ 16,552.10	
	Allowances .....	60.00		
	Freight, Cartage and Express .....	125.00	119.28	
	Telephones, Telegrams and Postage ..	200.00	85.35	
	Printing, Stationery and Office Equipment .....	725.00	405.92	\$ 6.54
	Travelling Expenses .....	6,000.00	4,800.00	
	Educational and Informational Publicity .....	18,000.00	14,265.97	3,681.73
	Sundries .....	873.00	718.12	1.55
		\$ 42,551.00	\$ 36,946.74	\$3,689.82
264 793	HOSPITAL DESIGN—			
	Salaries .....	\$ 17,214.00	\$ 13,967.87	
	Freight, Cartage and Express .....	200.00	8.61	
	Telephones, Telegrams and Postage ..	200.00	150.88	
	Printing, Stationery and Office Equipment .....	4,500.00	714.76	\$ 30.00
	Travelling Expenses .....	4,000.00	1,635.72	
	Professional and Special Services .....	1,000.00		
	Sundries .....	550.00	495.46	
		\$ 27,664.00	\$ 16,973.30	\$ 30.00
265 794	MENTAL HEALTH			
	Temporary Assistance .....	\$ 17,312.00	\$ 12,503.71	
	Allowances .....	90.00		
	Freight, Cartage and Express .....	450.00	391.59	
	Telephones, Telegrams and Postage ..	500.00	364.67	
	Printing, Stationery and Office Equipment .....	1,250.00	677.91	\$ 37.75
	Travelling Expenses .....	6,500.00	4,135.76	
	Educational and Informational Publicity .....	56,570.00	46,860.34	8,464.21
	Professional and Special Services .....	5,000.00	2,784.71	
	Sundries .....	200.00	181.10	13.22
		\$ 87,872.00	\$ 67,899.79	\$8,515.18
266	BLINDNESS CONTROL			
	Salaries .....	\$ 16,410.00	\$ 15,825.34	
	Freight, Cartage and Express .....	100.00	45.98	
	Telephones, Telegrams and Postage ..	300.00	55.88	
	Printing, Stationery and Office Equipment .....	500.00	84.59	
	Travelling Expenses .....	2,000.00	1,790.50	
	Educational and Informational Publicity .....	3,950.00	3,933.33	
	Professional and Special Services .....	20,550.00	2,525.67	\$8,737.16
	Sundries .....	700.00	91.59	
		\$ 44,510.00	\$ 24,352.88	\$8,737.16

## STATEMENT OF EXPENDITURES—Con.

Vote No.	Name of Vote	Allotments	Net Expenditure	Commitments forwarded to 1949-50
267	EPIDEMIOLOGY—			
	Temporary Assistance.....	\$ 13,404.00	\$ 12,874.03	
	Freight, Cartage and Express.....	150.00	14.10	
	Telephones, Telegrams and Postage.....	550.00	34.66	
	Printing, Stationery and Office Equipment.....	3,500.00	1,503.06	\$ 220.18
	Travelling Expenses.....	3,000.00	2,587.22	
	Professional and Special Services.....	1,000.00		
	Sundries.....	1,100.00	217.44	44.65
		\$ 22,704.00	\$ 17,230.51	\$ 264.83
268	GRANTS TO INSTITUTIONS ASSISTING SAILORS—			
	Navy League of Canada, Halifax, N.S.	\$ 200.00	\$ 200.00	
	Sailors Institute, North Sydney, N.S.	200.00	200.00	
	Navy League of Canada, Sydney, N.S.	200.00	200.00	
	Seamen's Mission Society, Saint John, N.B.	200.00	200.00	
	Catholic Sailors' Club, Saint John, N.B.	200.00	200.00	
	Catholic Sailors' Club, Montreal, P.Q.	200.00	200.00	
	Montreal Seamen's Institute, Montreal, P.Q.	200.00	200.00	
	Montreal Sailors' Hostel, Montreal, P.Q.	200.00	200.00	
	Catholic Seamen's Club, Quebec, P.Q.	200.00	200.00	
	Quebec Seamen's Institute, Quebec, P.Q.	200.00	200.00	
	Vancouver Sailors' Home, Vancouver, B.C.	200.00	200.00	
	Victoria Seamen's Institute, Victoria, B.C.	200.00	200.00	
		\$ 2,400.00	\$ 2,400.00	
271	CIVIL AVIATION MEDICINE—			
796	Temporary Assistance.....	\$ 8,704.00	\$ 8,356.62	
	Freight, Cartage and Express.....	500.00	1.50	
	Telephones, Telegrams and Postage.....	500.00	117.44	
	Printing Stationery and Office Equipment.....	2,800.00	530.97	\$1,654.73
	Travelling Expenses.....	3,500.00	2,184.76	
	Professional and Special Services.....	6,500.00	4,916.33	
	Sundries.....	700.00	94.18	
	Acquisition of Equipment.....	500.00	258.65	
		\$ 23,704.00	\$ 16,460.45	\$1,654.73
269	MEDICAL SERVICES—INDIANS AND			
295	ESKIMOS—			
	Salaries and Wages.....	\$1,324,043.00	\$1,323,952.13	
	Allowances.....	75,135.00	73,767.53	
	Materials and Supplies.....	961,500.00	924,672.69	\$20,875.79
	Travelling Expenses.....	326,000.00	323,724.62	
	Freight, Cartage and Express.....	93,325.00	93,318.65	
	Telephones, Telegrams and Postage.....	18,000.00	17,888.96	
	Professional and Special Services.....	3,149,724.00	3,149,226.32	
	Metre Rates.....	38,800.00	38,683.01	
	Rents.....	9,200.00	9,182.33	
	Repairs and Upkeep of Equipment.....	59,200.00	56,641.78	1,360.30
	Repairs and Upkeep of Buildings Works and Structures.....	57,500.00	55,636.37	
	Educational and Informational Publicity.....	8,700.00	1,040.70	
	Sundries.....	77,300.00	75,045.14	
	Acquisition of Equipment.....	275,252.00	242,304.58	23,465.52
	Acquisition of Land and/or Construction of Buildings, Works and Structures.....	1,591,951.00	1,549,110.22	
	Printing, Stationery and Office Equipment.....	28,000.00	27,701.75	
		\$8,093,630.00	\$7,961,896.78	\$45,701.61

## STATEMENT OF EXPENDITURES—Con.

Vote No.	Name of Vote	Allotments	Net Expenditure	Commitments forwarded to 1949-50
270	GRANTS TO HOSPITALS which care for Indians and Eskimos.....	\$55,000.00	\$40,000.00	.....
797	GENERAL HEALTH GRANTS			
	Health Survey Grant.....	\$ 625,000.00	\$ 154,174.91	
	Hospital Construction Grant.....	13,000,000.00	2,223,356.35	
	General Public Health Grant.....	4,395,000.00	781,535.02	
	Tuberculosis Control Grant.....	3,000,000.00	2,585,603.60	
	Mental Health Grant.....	4,000,000.00	439,126.79	
	Venereal Disease Control Grant.....	275,000.00	99,101.42	
	Crippled Children's Grant.....	500,000.00	103,916.14	
	Professional Training Grant.....	500,000.00	232,363.48	
	Public Health Research Grant.....	100,000.00	42,539.03	
	Cancer Control Grant.....	3,500,000.00	866,641.51	
		\$29,895,000.00	\$7,528,353.25	
272	WELFARE BRANCH ADMINISTRATION—			
	Salaries.....	\$23,428.00	\$22,827.58	
	Allowances.....	120.00		
	Freight, Cartage and Express.....	50.00	2.39	
	Telephones, Telegrams and Postage.....	1,200.00	452.24	
	Printing, Stationery and Office Equipment.....	2,000.00	396.74	\$ 52.30
	Travelling Expenses.....	5,500.00	2,103.38	
	Educational and Informational Publicity.....	2,500.00	1,596.92	648.40
	Professional and Special Services.....	2,000.00		
	Sundries.....	300.00	285.91	
		\$37,098.00	\$27,635.16	\$700.70
273	FAMILY ALLOWANCES ADMINISTRATION			
	Salaries and Wages.....	\$1,427,703.00	\$1,426,965.32	
	Allowances.....	110.00	18.00	
	Freight, Cartage and Express.....	4,800.00	4,798.92	
	Telephones, Telegrams and Postage.....	56,500.00	55,397.34	
	Printing, Stationery and Office Equipment.....	75,500.00	72,911.23	\$6,284.76
	Travelling Expenses.....	44,500.00	43,690.88	
	Educational and Informational Publicity.....	37,000.00	36,132.02	397.46
	Professional and Special Services.....	48,500.00	36,831.39	1,500.00
	Sundries.....	22,900.00	21,113.48	508.49
		\$1,717,513.00	\$1,697,858.58	\$8,690.71
274	OLD AGE PENSIONS AND PENSIONS TO THE BLIND ADMINISTRATION—			
	Salaries.....	\$32,082.00	\$32,082.00	
	Allotted from Vote 85, Salaries, etc.....	3,783.00	3,783.00	
	Freight, Cartage and Express.....	130.00	129.58	
	Telephones, Telegrams and Postage.....	260.00	228.38	
	Printing, Stationery and Office Equipment.....	1,250.03	1,244.17	\$1.00
	Travelling Expenses.....	14,193.00	14,172.33	
	Professional and Special Services.....	11,887.00	11,886.12	
	Sundries.....	30.00	25.20	
		\$63,615.00	\$63,550.78	\$1.00
275	NATIONAL PHYSICAL FITNESS ADMINISTRATION— (See also Open Suspense and Revenue Accounts).....	\$48,871.00	\$48,871.00	

## DEPARTMENT OF NATIONAL HEALTH AND WELFARE

STATEMENT OF EXPENDITURES—*Con.*

Vote No.	Name of Vote	Allotments	Net Expenditure	Commitments forwarded to 1949-50
276	NATIONAL PHYSICAL FITNESS ASSISTANCE TO PROVINCES—(See also Open Suspense and Revenue Accounts)	\$100,353.00	\$100,353.00	
277	ASSISTANCE TO SCHOOLS OF SOCIAL WORK—			
	The Maritime School of Social Work...	3,180.00	3,180.00	
	The School of Social Work of Laval University...	6,120.00	6,120.00	
	The School of Social Work of the University of Montreal...	6,020.00	6,020.00	
	The McGill University School of Social Work...	6,300.00	6,300.00	
	The School of Social Work of the University of Toronto...	14,640.00	14,640.00	
	The School of Social Work of the University of Manitoba...	4,310.00	4,310.00	
	The School of Social Work of the University of British Columbia...	9,430.00	9,430.00	
		\$50,000.00	\$50,000.00	
	MISCELLANEOUS GRANTS—			
	Grant to:			
278	Canadian Welfare Council...	\$12,600.00	\$12,600.00	
279	Canadian National Committee for Mental Hygiene...	10,000.00	10,000.00	
280	Health League of Canada...	10,000.00	10,000.00	
281	Canadian Public Health Association...	5,000.00	5,000.00	
282	Canadian National Institute for the Blind...	18,000.00	18,000.00	
283	L'association Canadienne Française des Aveugles...	4,050.00	4,050.00	
284	L'Institut Nazareth de Montréal...	4,050.00	4,050.00	
285	Montreal Association for the Blind...	4,050.00	4,050.00	
286	Canadian Tuberculosis Association...	20,250.00	20,250.00	
287	Victorian Order of Nurses...	13,100.00	13,100.00	
288	St. John Ambulance Association...	4,050.00	4,050.00	
289	Canadian Red Cross Society...	10,000.00	10,000.00	
798	Canadian Paraplegic Association...	15,000.00	15,000.00	
		\$44,922,921.53	\$21,893,114.42	\$161,117.90
	Total Ordinary:			
	Statutory...	\$337,689,574.69	\$337,689,574.69	
	Voted...	44,922,921.53	21,893,114.42	\$161,117.90
290	DEMOBILIZATION AND RECONVERSION Grant to Canadian Nurses Association...	\$9,719.00	\$9,718.40	
291	War Charities Division—Administration—			
	Temporary Assistance...	9,922.00	9,659.98	
	Allowances...	90.00		
	Printing, Stationery and Office Equipment...	300.00	87.69	
	Travelling Expenses...	2,200.00	1,999.48	
	Sundries...	900.00	68.68	
		\$13,412.00	\$11,815.83	
292	DIVISION OF VOLUNTARY WAR RELIEF			
	Temporary Assistance...	\$6,824.00	\$6,369.77	
	Travelling Expenses...	35.00	34.35	
	Sundries...	400.00	305.49	
		\$7,259.00	\$6,709.61	
94	Examination of Applicants for Pensions in respect of Blindness...	\$2,686.18	\$2,686.18	
	Total Demobilization and Reconversion...	\$33,076.18	\$30,930.02	

TABLE 61  
(Chief Treasury Officer)

## OPEN SUSPENSE AND REVENUE ACCOUNTS

	Cr. Balance March 31, 1948	Receipts	Net Expenditure	Balance March 31, 1949
DEPOSIT AND TRUST ACCOUNT— National Physical Fitness— (See also Votes 275 and 276)				
ADMINISTRATION—				
Temporary Assistance.....		\$ 19,751.00	\$ 17,681.10	.....
Allowances.....		120.00		
Freight, Cartage and Express.....		2,000.00	811.27	
Telephones, Telegrams and Postage.....		500.00	892.04	
Printing, Stationery and Office Equipment.....		2,500.00	5,334.87	
Travelling Expenses.....		8,000.00	7,488.60	
Educational and Informational Publicity.....		10,000.00	20,953.05	
Professional and Special Services.....		5,000.00	22.00	
Sundries.....		1,000.00	821.22	..
Assistance to Provinces.....		100,353.00	78,884.76	..
	\$189,611.30	\$149,224.00	\$132,888.91	\$205,946.39

	Cr. Balance March 31, 1948	Debit	Credit	Balance March 31, 1949
Unclaimed Cheques Suspense	\$1,356.96			\$1,356.96

Ordinary Revenue—	\$	Cts.
Privileges, Licenses and Permits.....	\$ 22,903.28	
Proceeds from Sales.....	8,515.69	
Services and Service Fees.....	351,659.14	
Refund Previous Year's Expenditures.....	6,107.62	
Miscellaneous.....	127,775.02	
	<u>\$516,960.75</u>	







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UNITED NATIONS  
SOCIAL AND ECONOMIC  
COUNCIL  
SOCIAL COMMISSION  
INTERNATIONAL CHILDREN'S  
EMERGENCY FUND

NATIONAL COUNCIL ON  
PHYSICAL FITNESS

ADVISORY BOARDS, COUNCILS AND COMMITTEES

- Canadian Council on Nutrition
- Food and Drug Advisory Boards
- Interprovincial Board on Old Age Pensions
- Proprietary or Patent Medicine Advisory Board
- Technical Advisory Committees on
  - Child Hygiene
  - Industrial Hygiene
  - Maternal Hygiene
  - Mental Health
  - Public Health Engineering
  - Public Health Laboratory Services
- Dominion Provincial Conference of Venereal Disease Control Directors





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CANADA

**THE DEPARTMENT OF  
NATIONAL HEALTH  
AND WELFARE - OTTAWA**

**ANNUAL REPORT**

**1949-1950**

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**THE DEPARTMENT OF  
NATIONAL HEALTH AND WELFARE  
ANNUAL REPORT**

**FOR THE FISCAL YEAR  
ENDED MARCH 31**

**1950**

**Edmond Cloutier, C.M.G., B.A., L.Ph.,  
King's Printer and Controller of Stationery,  
Ottawa, 1950**



*To His Excellency Field Marshal the Right Honourable the Viscount Alexander of Tunis, K.G., G.C.B., G.C.M.G., C.S.I., D.S.O., M.C., LL.D., A.D.C., Governor-General and Commander-in-Chief of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:


The undersigned has the honour to present to Your Excellency the Annual Report of the Department of National Health and Welfare for the fiscal year ended March 31, 1950.

Respectfully submitted,

PAUL MARTIN,  
*Minister of National Health and Welfare.*

April 1, 1950.





*That all might share in the national  
heritage of health and well-being,  
was Canada's constant objective.*



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# DEPARTMENT OF NATIONAL HEALTH AND WELFARE

## MINISTER

HONOURABLE PAUL MARTIN, K.C., P.C., M.P., M.A., LL.M., LL.D.

---

## DEPUTY MINISTER OF NATIONAL HEALTH AND WELFARE (HEALTH)

G. D. W. CAMERON, M.D., C.M., D.P.H.

## DEPUTY MINISTER OF NATIONAL HEALTH AND WELFARE (WELFARE)

G. F. DAVIDSON, B.A., M.A., Ph.D.

---

## HEALTH BRANCH

### *Director of Health Services,*

H. A. ANSLEY, M.D., D.P.H.

### *Assistant Director of Health Services,*

F. S. PARNEY, M.D.

### *Chief, Blindness Control Division,*

J. H. GROVE, M.D.

### *Chief, Child and Maternal Health Division,*

ERNEST COUTURE, M.D., C.M.

### *Chief, Civil Aviation Medicine Division,*

H. E. WILSON, M.D.

### *Chief, Civil Service Health Division,*

R. G. RATZ, M.B.

### *Chief, Dental Health Division,*

H. K. BROWN, D.D.S., D.D.P.H.

### *Chief, Epidemiology Division,*

A. F. W. PEART, M.B.E., M.D., C.M., D.P.H.

### *Chief, Hospital Design Division,*

H. G. HUGHES, B.Arch., A.R.I.B.A., M.R.A.I.C.

### *Chief, Industrial Health Division,*

K. C. CHARRON, M.D.

### *Chief, Industrial Health Laboratory,*

K. KAY, M.A., Ph.D.

### *Chief, Laboratory of Hygiene,*

J. GIBBARD, B.S.A., M.Sc.

### *Chief, Mental Health Division,*

C. G. STOGDILL, M.A., M.D.

### *Chief, Narcotic Control Division,*

K. C. HOSSICK.

### *Chief, Nutrition Division,*

L. B. PETT, B.S.A., M.A., Ph.D., M.D., F.C.I.C.

### *Chief, Public Health Engineering Division,*

J. R. MENZIES, B.A.Sc., O.L.S., C.E.

### *Chief, Quarantine, Immigration Medical and Sick Mariners Services,*

H. D. REID, M.D.

### *Chief, Tuberculosis and Venereal Disease Control Division,*

B. D. B. LAYTON, M.D.

### *Director of Health Insurance Studies,*

F. W. JACKSON, M.D., D.P.H.

### *Assistant Directors of Health Insurance Studies,*

M. LANGLOIS, M.D.,

G. E. WRIDE, M.D., D.P.H.

### *Director, Food and Drug Divisions,*

C. A. MORRELL, M.A., Ph.D.,

F.R.S.C.

### *Assistant Director, Food and Drug Divisions,*

A. PAPINEAU-COUTURE, B.A.

### *Chief, Inspection Services,*

R. D. WHITMORE, O.B.E., F.C.I.C.

### *Chief, Laboratory Services,*

L. I. PUGSLEY, B.A., M.Sc., Ph.D.

### *Chief, Proprietary or Patent Medicines Division,*

L. P. TEEVENS.

### *Director, Indian Health Services,*

P. E. MOORE, M.D., D.P.H.

### *Assistant Directors, Indian Health Services,*

H. A. PROCTOR, M.D.

O. LEROUX, M.D.

**WELFARE BRANCH**

*National Director of Family  
Allowances,*  
R. B. CURRY, B.A., LLB.

*Executive Assistant (Welfare),*  
Mrs. D. B. SINCLAIR, O.B.E., B.A.,  
M.A., LL.D.

*Director, Old Age Pensions  
Division,*  
J. W. MACFARLANE.

*National Director of Physical Fitness,*  
ERNEST LEE, B.A., B.Sc., in P.E.

**ADMINISTRATION BRANCH**

*Departmental Secretary,*  
Miss O. J. WATERS.

*Director, Information Services  
Division,*  
C. W. GILCHRIST, O.B.E., E.D.

*Executive Assistant (Personnel, Pur-  
chasing and Supply),*  
J. C. RUTLEDGE, B.Com.

*Legal Adviser,*  
R. E. CURRAN, K.C., B.A., LL.B.

*Departmental Librarian,*  
Miss M. D. MORTON, B.H.Sc.,  
B.L.S.

*Chief, Research Division,*  
J. W. WILLARD, M.A., M.P.A., A.M.

---

*Chief, Translation Office,*  
G. A. SAUVE.

*Chief Treasury Officer,*  
T. F. PHILLIPS.

---

# DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS

## ADMINISTRATIVE OFFICES

Ottawa—Jackson Building, Bank and Slater Streets.

## FAMILY ALLOWANCES REGIONAL OFFICES

St. John's—29 Buckmasters' Field.  
Charlottetown—59 Queen Street  
Halifax—Industrial Building  
Fredericton—City Hall  
Quebec—51 Boulevard des Capucins  
Toronto—122 Front Street West  
Winnipeg—Lindsay Building  
Regina—Saskatchewan Motors Building, Broad Street  
Edmonton—10201, 100th Street  
Victoria—Weiler Building

## FOOD AND DRUG LABORATORIES

Ottawa—35 John Street  
Halifax—Dominion Public Building (P.O. Box 605)  
Montreal—379 Common Street  
Toronto—65 Victoria Street  
Winnipeg—Aragon Building, 244 Smith Street  
Vancouver—Federal Building, 325 Granville Street

## IMMIGRATION MEDICAL SERVICE OFFICES

### *Canada*

Gander—Gander Airport  
Halifax—Immigration Building, Pier 21  
North Sydney—Immigration Building  
Saint John—Quarantine Hospital (P.O. Box 1406)  
Quebec—Savard Park Immigration Hospital  
Montreal—Immigration Building, 1162 St. Antoine Street  
Victoria—Immigration Building

### *Overseas*

London—42-46 Weymouth Street, Marylebone, W.1  
The Hague—Canadian Embassy  
Brussels—Canadian Embassy  
Paris—Canadian Embassy  
Rome—Canadian Embassy

## INDIAN HEALTH SERVICES

### Hospitals

Prince Rupert, B.C.—Miller Bay Indian Hospital  
Nanaimo, B.C.—Nanaimo Indian Hospital  
Sardis, B.C.—Coqualeetza Indian Hospital  
Morley, Alta.—Stoney Indian Hospital  
\*Cardston, Alta.—Blood Indian Hospital  
Brocket, Alta.—Peigan Indian Hospital  
Gleichen, Alta.—Blackfoot Indian Hospital  
Edmonton, Alta.—Charles Camsell Indian Hospital  
Fort Qu'Appelle, Sask.—Fort Qu'Appelle Indian Hospital  
North Battleford, Sask.—North Battleford Indian Hospital  
Hodgson, Man.—Fisher River Indian Hospital  
Pine Falls, Man.—Fort Alexander Indian Hospital  
†Selkirk, Man.—Dynevour Indian Hospital  
†The Pas, Man.—Clearwater Lake Indian Hospital  
†Brandon, Man.—Brandon Indian Hospital

# DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS—Continued

Norway House, Man.—Norway House Indian Hospital  
 Fort William, Ont.—Squaw Bay Indian Hospital.  
 Manitowaning, Ont.—Manitowaning Indian Hospital  
 Moose Factory, Ont.—Moose Factory Indian Hospital  
 Oshweken, Ont.—Lady Willingdon Indian Hospital  
 Sioux Lookout, Ont.—Sioux Lookout Indian Hospital  
 \*Perth, N.B.—Tobique Indian Hospital

## Nursing Stations

Coppermine, N.W.T.  
 Fort Good Hope, N.W.T.  
 Fort McPherson, N.W.T.  
 Fort Norman, N.W.T.  
 Lake Harbour, N.W.T.  
 Port Simpson, B.C.  
 Driftpile, Alta.  
 Saddle Lake, Alta.  
 Lac la Ronge, Sask.  
 Broadview, Sask.  
 God's Lake, Man.  
 Island Lake, Man.

Oxford House, Man.  
 Nelson House, Man.  
 Little Saskatchewan (Gypsumville), Man.  
 Cross Lake, Man.  
 Big Trout Lake, Ont.  
 Osnaburgh House, Ont.  
 Lac Seul, Ont.  
 Fort Chimo, Que.  
 Fort George, Que.  
 Bersimis, Que.  
 Port Harrison, Que.  
 Eskasoni, N.S.

## Health Centres

Sydney, N.S.  
 Shubenacadie, N.S.  
 Lennox Island, P.E.I.  
 Kingsclear, N.B.  
 Newcastle, N.B.  
 Seven Islands, Que.  
 Caughnawaga, Que.  
 Maniwaki, Que.  
 Barriere (seasonal)  
 Notre Dame du Nord, Que.  
 Amos, Que.  
     Obidjiwan (seasonal)  
     Mistassini (seasonal)  
     Maniwan (seasonal)  
     Waswanipi (seasonal)  
 Point Bleue, Que.  
 St. Regis, Que.  
 Deseronto, Ont.  
 Muncey, Ont.  
 Sarnia, Ont.  
 Ohsweken, Ont.  
 Christian Island, Ont.  
 Chapleau, Ont.  
 Port Arthur, Ont.  
 The Pas, Man.

Sandy Bay, Man.  
 Rossburn, Man.  
 Punnichy, Sask.  
 Prince Albert, Sask.  
 Fort St. James, B.C.  
 Williams Lake, B.C.  
 Kamloops, B.C.  
 Hazelton, B.C.  
 New Westminster, B.C.  
 Duncan, B.C.  
 Alert Bay, B.C.  
 Kincolith, B.C.  
 Port Simpson, B.C.  
 Port Edward, B.C.  
 Vancouver, B.C.  
 Whitehorse, Y.T.  
     Carmacks (seasonal)  
     Teslin (seasonal)  
 Fort Smith, N.W.T.  
 Fort Resolution, N.W.T.  
 Fort Simpson, N.W.T.  
 Aklavik, N.W.T.  
 Chesterfield Inlet, N.W.T.  
 Pangnirtung, Baffin Island  
 Winnipeg, Man.

\*Departmental hospitals staffed by religious orders on stipend.

†Departmental sanatoria staffed and operated by the Sanatorium Board of Manitoba, with reimbursement on a per diem basis.

INDUSTRIAL HEALTH LABORATORY  
 Ottawa—200 Kent Street

LABORATORIES OF HYGIENE  
 Ottawa—45 Spencer Street  
 Kamloops, B.C.

DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS—*Continued*

## PUBLIC HEALTH ENGINEERING DISTRICT OFFICES

Moncton—General Motors Building  
Montreal—1162 St. Antoine Street  
St. Catharines—4th Floor, Dominion Building  
Port Arthur—Room 1, Customs Building  
Winnipeg—207 Scientific Building, 425½ Portage Avenue  
Edmonton—Room 302, Alberta-Jasper Building  
Vancouver—321 Federal Building, 325 Granville Street

## QUARANTINE STATIONS

Halifax—Rockhead Hospital  
Saint John—Quarantine Hospital (P.O. Box 1406)  
Quebec—Louise Basin and Savard Park Immigration Hospital  
Montreal—379 Common Street  
Vancouver—Immigration Building  
Victoria—William Head, B.C.

## SICK MARINERS CLINICS AND HOSPITALS

Halifax—Immigration Building, Pier 21  
Sydney—Marine Hospital  
Lunenburg—Marine Hospital  
Saint John—Quarantine Hospital  
Quebec—Louise Basin  
Vancouver—Immigration Building

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*To the Honourable Paul Martin, K.C., P.C., M.P., M.A., L.L.M., LL.D.,  
Minister of National Health and Welfare, Ottawa.*

SIR,—We have the honour to present, herewith, the Annual Report of the Department of National Health and Welfare, for the fiscal year ended March 31, 1950.

Respectfully Submitted,

G. D. W. Cameron,  
*Deputy Minister of National Health  
and Welfare (Health)*

G. F. Davidson,  
*Deputy Minister of National Health  
and Welfare (Welfare)*

OTTAWA,  
April 1, 1950.



## INTRODUCTION

With increasingly effective co-operation between all the agencies in these fields, new ways were found and additional measures were adopted, this year, further to ensure the health and to promote the general well-being of the people of Canada.

Vigilant watch was kept against possible threats to the public health, means for raising the national health standard were explored and provisions for the benefit of children, the aged and the handicapped helped to maintain a generally high level of social security.

As federal, provincial, local and voluntary services combined to provide wider and better-equipped health and welfare facilities, advances were made and promising projects were initiated.

### *Federal Grants*

Grants provided to the provinces under the National Health Program, to strengthen their health facilities and to develop their services, in preparation for the possible introduction of a nation-wide medical care and hospitalization plan, have enabled the provinces steadily to increase their hospital accommodation and extend their activities. The National Health Program was providing more than \$33,000,000 annually in the general plan to improve the country's capacity for seeking out and treating illness.

Although the Program had been in operation less than two years, more than half of the goal of 40,000 new hospital beds, which it had been hoped could be provided within five years through these measures, had already been reached by the end of this fiscal year, and the country's health facilities had been strengthened immeasurably.

Surveys which the provinces had carried out, preparatory to making use of federal and provincial grants to strengthen health services, have added to the fund of information essential to sound health planning. As these surveys revealed the extent to which government agencies were meeting needs, and what and where new effort was required, plans were laid for a nation-wide sickness survey of thousands of families, to obtain an intimate picture of the incidence and prevalence of morbidity. This survey will be conducted in 1950, jointly by federal and provincial health authorities and the Dominion Bureau of Statistics.

### *International Interests*

While working to protect the health and welfare of her own people, Canada, through the Department of National Health and Welfare, continued to play a major role in United Nations health and welfare organizations and to co-operate actively with international control bodies in these fields.

The Minister of National Health and Welfare was a Member of the Canadian Delegation to the 1949 General Assembly of the United Nations.

The Deputy Minister of National Health and Welfare (Health) headed the Canadian delegation to the Second World Health Assembly, held in Rome in June, 1949. Canadian delegates to meetings of the World Health Organization stressed the desirability of a program which would be most likely to assure the greatest returns for expenditures involved. They urged the provision of the type of assistance which would most readily enable countries to develop, and assume full responsibility for, their own health services as quickly as possible rather than continue to rely upon the support of the Organization.

The Deputy Minister of National Health and Welfare (Welfare) was Alternate Delegate to the Tenth Session of the Economic and Social Council, and Canadian representative on the Social Commission, and also attended meetings of the Fourth Session, in May 1949. He was represented at the Fifth Session, in December, by the National Director of Family Allowances. The Executive Assistant (Welfare) was Canada's representative to the United Nations International Children's Emergency Fund.

# HEALTH BRANCH

There were no major epidemics during the year, and some improvement in the general health picture was indicated in reports correlated by the Dominion Bureau of Statistics.

The birth rate in Canada in 1949 was 26·9 per 1,000 population, a decrease from the high rate of 28·6 in 1947 and from 27·0 in 1948. The death and marriage rates also decreased, both being 9·2 in 1949, compared with 9·3 and 9·6 in 1948.

Canada's maternal mortality rate remained at 1·5 per 1,000 live births—comparing favourably with rates of other countries—but a continuing infant mortality rate of 44 per 1,000 live births, which was higher than the rates of 11 other countries and double those of two of them, continued to cause concern.

The Dominion Bureau of Statistics reported that, among the causes of death that affect mainly children and young adults, there were declines from the previous year in diphtheria and measles, but increases in mortality from whooping cough, acute poliomyelitis and diarrhoea and enteritis. The tuberculosis rate declined from 37·1 in 1948 to 30·5 in 1949; deaths from scarlet fever totalled 14, as compared with 38 in the previous year; deaths from motor accidents increased from 2,070 in 1948 to 2,223, and other accidental deaths from 5,722 to 5,803.

Among the causes which affect mainly older people, the cancer death rate decreased from 126·4 per 100,000 population in 1948 to 124·7, while the cardiovascular group of diseases, amounting to over 54,700, or about 45 per cent of all deaths, in 1949, accounted for an increased rate of 415·3 in 1949, as compared with 414·0 in 1948.

Looking back over half a century of health progress in Canada, public health authorities noted that there had been a 20-year increase in the average life expectancy in that period, a reduction of one third in the general mortality rate and very definite progress in medical science and in the application of new knowledge.

Although it was still far from satisfactory, the infant mortality rate had been cut 50 per cent in half a century and the maternal mortality rate had been reduced in that period by 60 per cent.

## *Events of the Year*

Among outstanding events of the year were several which promised continued improvement in health conditions.

Immigration medical provisions forestalled possible introduction of disease from abroad, notably following an outbreak of smallpox in Scotland at the end of the fiscal year.

Federal health services, including the department's Quarantine, Immigration Medical and Sick Mariners services, Food and Drug control and Public Health Engineering supervision, were extended to the new province of Newfoundland.

The department's facilities for ensuring the health of native peoples were expanded and Indian Health Services opened the 21st of its chain of hospitals.

Research was carried on relating to the manufacture and use of such new compounds as cortisone, used experimentally, and possibly holding out promise in the treatment of many hitherto difficult diseases.

In the industrial health field a program was initiated to meet potential hazards created by the increased use of radio-active materials and radiation-producing apparatus.

The National Cancer Institute of Canada was provided with facilities at the Laboratory of Hygiene for a Tumour Registry, which will serve as a clearing house of information concerning malignant growths.

Plans were made, also, for new quarters for services of the Laboratory of Hygiene, both at Ottawa and at the Western Branch. Facilities for the study of the virus diseases will be available when a new building is erected for this purpose at the Capital, and the Western Branch, now working at Kamloops, B.C., on virus infections and rodent plagues of particular concern to Western Canada, will have more suitable laboratory facilities at Edmonton, Alta., where a lease has been signed with the University of Alberta for a site on the campus.

In connection with the observance of the 75th anniversary of the passage of Canada's first food and drug regulations, public attention was focused on federal services ensuring the safety of food, drugs and pharmaceuticals. New pharmaceutical products were checked closely and, with the co-operation of manufacturers, reasonable marketing of such preparations as the antihistamines was achieved.

An active health education campaign was carried out, with and through provincial and other authorities, and, in co-operation with United States agencies, a motion picture was made on cancer.

### *Health Expenditures*

Widespread expansion of services for Indians and Eskimos accounted for by far the greatest single expenditure in federal health operations. The overall cost of the Health Branch, including health grants of all kinds, was \$29,690,330.48. This was made up of: Grants, \$15,878,007.07; Statutory Health Services, \$12,857,023.87; Co-operative services with the Provinces, \$955,299.54. Of the \$12,857,023.87 for statutory functions \$9,924,124.00 was for Indian Health work.

Costs of other basic health services were: Health Branch administration, \$101,549.35; Food and Drugs, \$654,078.46; Proprietary or Patent Medicines, \$25,015.70; Narcotics, \$139,698.77; Quarantine and Leprosy, \$262,485.29; Sick Mariners, \$580,138.02; Immigration Medical, \$807,642.52; Public Health Engineering, \$128,105.88; Civil Aviation Medicine, \$35,490.29, and Civil Service Health, \$198,695.59.

Expenditures on services working with and through the provinces were: Laboratory of Hygiene, \$343,672.05; Child and Maternal Health, \$74,702.39; Industrial Health, \$116,936.27; Nutrition, \$128,268.80; Venereal Disease Control, \$35,387.18; Dental Health, \$45,733.11; Hospital Design, \$18,890.77; Mental Health, \$86,080.34; Blindness Control, \$27,520.67; Epidemiology, \$22,010.63 and Health Insurance Studies, \$56,097.33.

In addition to \$15,728,907.07 made available to the provinces under terms of the National Health Program, grants of \$146,500 were made to associations and societies in the health field and of \$2,600 to Sailors' Hostels.

### *Close Co-ordination*

Through meetings of the DOMINION COUNCIL OF HEALTH and of several technical committees consisting of representatives of federal and provincial departments, close co-ordination of the respective activities of each was

achieved and unnecessary duplication and overlapping avoided. Many co-operative undertakings were planned and initiated and, where desirable, uniform standards and methods were evolved for adoption by all provinces.

During the year the DOMINION COUNCIL OF HEALTH held its 57th meeting. One of the major problems on the agenda was the crucial nurse shortage and the Council agreed on a number of measures to be taken to relieve the situation, including the expansion of provincial programs for training nursing assistants.

A uniform pattern for ensuring the safety of individuals working with radio-active materials was adopted, and arrangements were concluded for the national sickness survey to be carried out by the provinces in co-operation with the department and the Dominion Bureau of Statistics.

Technical committees which met during the year included, the Advisory Committee on Public Health Laboratory Services, the Advisory Committee on Mental Health, the Canadian Council on Nutrition, the Provincial Health Survey Directors and, for the first time, a Dominion-Provincial conference on Public Health Engineering was held. Meetings of these technical groups and recommendations arising therefrom were correlated by the DOMINION COUNCIL OF HEALTH.

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# HEALTH SERVICES

## BLINDNESS CONTROL

Results were apparent this year from the Blindness Control Division's activities in advising provincial health authorities regarding measures for the conservation of sight. Provincial projects submitted for grants under the National Health program included provision for a glaucoma research clinic at the University of Toronto and projects are also under way to ascertain the causes of blindness in children and to determine the best way of testing the vision of school pupils. Equipment for testing children's vision has been purchased in Manitoba and other projects are planned.

As an outcome of these studies it is hoped that provincial authorities will be able to extend their public health services for the preservation of vision. This field has been largely untouched and offers great scope for further endeavour directed to the prevention of blindness and to the improvement of lighting and eye-safety factors in industry.

So far, only Nova Scotia, New Brunswick and Quebec have participated in a joint treatment experiment, under which the federal government pays 75 per cent of the cost, to ascertain what percentage of blind pensioners could have useful sight restored by remedial treatment. Some 50 cataract operations have been performed and successful visual results obtained in about half these cases have made it possible to remove those helped from pension rolls.

Since 25 per cent of blindness is due to cataract, and this experiment proves that useful vision can be restored in at least half the cases treated, it appears that not fewer than 12 per cent of the pensions now paid could be discontinued if treatment for suitable cases was made obligatory at time of application for pension.

More blindness could be prevented throughout Canada if the public were better informed and if adequate preventive treatment facilities were available, particularly in rural areas. The Blindness Control Division, since its creation, has sought to make the facts concerning sight and its preservation more widely known and, in collaboration with the department's Information Services Division, has prepared and distributed widely numbers of pamphlets intelligible to the layman.

However, there are not enough oculists in Canada to provide adequate eye services. Too, since oculists tend to congregate in the larger centres, proper eye care cannot be obtained in most rural areas. There are no eye hospitals in Canada. It is considered that at least two hospitals are needed, where difficult eye cases could be treated and an adequate number of oculists trained. The present eye treatment facilities and the number of practising oculists would be entirely inadequate to meet the needs of any comprehensive health insurance scheme.

### *Blind Pensions*

In the administration of blind pensions, the division continued to arrange, this year, for eye examinations of all applicants for such pensions, making rulings as to visual eligibility and issuing the necessary certificates.

Of 2,791 applications for blind pension considered, 1,747, including 198 in Newfoundland, were approved. The total number of blind pensioners at March 31, 1950 was 10,517, or approximately 62 per cent of the more than 17,000 known blind in Canada. The 5,000 not on pension are debarred because

they are under 21 years of age, because they have incomes sufficiently high to exclude them from these benefits, or because they have not lived in Canada for 20 years.

The percentage of blind pensioners is highest in the Maritimes and in Quebec, and is fairly constant at a considerably lower level in the rest of Canada. The percentages of pensioners to total population are as follows: New Brunswick, .204; Nova Scotia, .142; Prince Edward Island, .126; Quebec, .097; Manitoba, .067; British Columbia .055; Saskatchewan, .055; Alberta, .052, and Ontario, .051.

In the provinces where the percentage of persons on blind pension is highest, the greatest increases occur mainly in certain rural areas where living conditions are poor and educational standards low. Too many of the blind, in these areas, are the issue of first-cousin marriages, thus perpetuating hereditary diseases, and there is a general lack of infusion of new blood stock. Medical facilities, also, are inadequate and preventive measures against blindness are almost entirely lacking.

In these areas, the people are quite "pension conscious". More than half the applicants for pension there are found to be visually ineligible. Most of them just need proper glasses. About 30 per cent of the applicants malingers, making it difficult for the oculists to determine their true visual acuity. The fact that the legal definition of blindness is very generous adds to the difficulty of weeding out malingerers and borderline cases.

Conditions like cataract, glaucoma, myopia and constitutional diseases affecting the sight are no respecters of persons. The better educated and more prosperous individuals affected tend, however, to demand and to receive appropriate medical care.

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## CHILD AND MATERNAL HEALTH

Through educational, consultative and other efforts, as well as by participation in demonstrations and surveys, the Child and Maternal Health Division continued to work with the provinces and other agencies in the constant fight to improve Canada's child and maternal health picture.

While progress in this field, according to the latest reliable statistics, was not spectacular, the general expansion of health services under inspiration of the National Health Program gave rise to hope for steady improvement, and the efforts of all were directed to finding new ways and means of saving more infant lives and making maternity safer.

### The Infant Situation

In 1948, the latest year for which exact figures are available, 347,307 babies were born alive in Canada. The number of live births has increased from year to year, there having been 117,839 more live births in 1948 than in 1939. This increase emphasized the urgency of strengthening efforts to lower infant mortality.

In 1948, the nation's loss in babies under one year was 15,164, a rate of 44 per 1,000 live births.

Although the following comparison with rates of other countries must necessarily be qualified by consideration of certain adverse factors in Canada, it is important as setting an objective for this country. (Unequal distribution of medical, nursing and hospital services and a combination of such factors

as climatic conditions and sparsity of population, with many mothers living in rural areas remote from proper facilities, all had a bearing on the Canadian rate).

*Infant Mortality Rates (per 1,000 live births)—1948*

New Zealand .....	22	England and Wales .....	34
Iceland .....	22 (1947)	Norway .....	35 (1947)
Sweden .....	23	Denmark .....	35
Australia .....	28	Switzerland .....	36
Netherlands .....	29	Union of South Africa	
United States .....	32	(whites) .....	37
		Canada .....	44

Thus, Canada's rate was double that of the lowest rates—those of New Zealand and Iceland—and higher than those of nine other countries.

One province had a rate as high as 61; another as low as 33. The lowest provincial rate was still approximately 50 per cent higher than the national rates for New Zealand and Iceland, and almost on a par with the national rates of the United States and England and Wales. It was evident, therefore, that Canada's national rate is excessive.

*Causes of death*

More than 50 per cent of infant deaths in Canada occur during the first month of life—8,897 out of 15,164, in 1948. This indicated that the care of mothers during pregnancy should receive prime attention, as most infant deaths were due to conditions which had their origin before the birth of the baby.

For instance, the leading cause of infant mortality was prematurity—3,890 in 1948, or 25 per cent of all infant deaths.

It is hoped that the interest manifested recently in the matter of premature births, as shown by the fact that two provinces have made provision for incubators for hospitals, on a province-wide scale, and that one is developing human milk banks for the care of prematures, will have a definite effect in reducing the toll from prematurity.

Respiratory diseases were responsible for the next highest number of infant deaths—2,622 in 1948. These included pneumonia, influenza and bronchitis. Congenital malformations accounted for the third largest number of baby deaths—1,987; diarrhoea and enteritis caused 1,472 infant deaths, and injury at birth brought death to 1,446 infants.

Paediatric specialists of the Canadian Medical Association are on record as recommending breast feeding as first choice in the care of infants, it having been demonstrated that babies fed on mother's milk react more favourably in regard to diarrhoea and enteritis in the newborn than babies fed on formulas.

Those five causes—prematurity, respiratory diseases, congenital malformations, diarrhoea and enteritis and injury at birth—took 11,417 babies out of a total of 15,164 who died before their first birthday, or 75 per cent.

Also to be considered was the fact that there were 6,879 stillborn babies in 1948.

Statistics are not available to give a clear picture concerning morbidity, but surveys carried out in Canada revealed that a large proportion of children reached school age showing defects which might have been prevented if proper attention had been given during the first few years of life. Also, among school-age children, the incidence of morbidity was very high, particularly with respect to nutrition. There is good reason, however, to expect improvement in this situation, in view of special interest now being given to perfecting school medical services.

### Maternal Situation

Out of 347,307 live births, in 1948, there were 510 maternal deaths—a rate of 1·5 per 1,000 live births.

This rate is considered creditable, in view of adverse conditions in many sections of the country. Canada's maternal mortality rate compares favourably with other countries. However, since 72 per cent of the maternal deaths were due to such conditions as toxæmia, haemorrhage and sepsis, still further improvement is possible.

One of the provinces is investigating factors associated with maternal mortality. Results of this study should go a long way in locating the weak spots and in directing efforts along effective lines. If adopted all over Canada, measures which may be suggested by this study could result not only in reducing mortality among mothers, but in decreasing morbidity and improving the infant situation.

Some of the improvement in the maternal situation was undoubtedly due to increase in hospitalization for childbirth. During ten years, the percentage of confinements in hospitals rose from 41 in 1939 to 72 in 1948. With hospitals providing more available service in emergency, the risk to mothers taking advantage of such facilities has been reduced to a minimum.

There has been a close relationship between the rate of hospitalization in the various centres and the rate of maternal deaths; the higher the percentage of births in hospitals, the lower the rate of fatal accidents to mothers. Federal grants have resulted in facilitating hospitalization, through adding beds to hospitals and perfecting maternity services in them. They have also contributed through providing special training for personnel engaged in obstetrical fields.

Another problem has been morbidity in mothers following childbirth, although it has been gratifying to note the greater interest being taken in recent years in the postnatal condition of mothers.

In this field, a project has been initiated under the National Health Program for the study of special conditions in mothers following early rising after childbirth. Another project involves the study of prenatal conditions in mothers who have given birth to a premature baby. Here, again, it is possible that common factors may be found which can bring about a reduction in the incidence of prematurity.

### Health Grants

Benefits which may be expected in the child and maternal health field from federal grants are indicated in measures initiated since the program was launched. Two provinces have established Child and Maternal Health divisions, bringing to four the number of such provincial agencies. Two provinces provided incubators on a province-wide scale, one of them to all hospitals having an obstetric service, the other to all hospitals of 50 or more beds. One province established and equipped three centres for prenatal and postnatal clinics.

A new project furnished equipment for chest x-ray of all mothers attending a prenatal clinic; another provided x-ray equipment for a study of 2,000 cases to determine pelvic sufficiency (pelvic angles or conformation of the pelvis).

A demonstration clinic, prenatal and postnatal, has been established for teaching purposes. Another project concerns the study of effects of early rising after childbirth. Appointments have been made of nurses trained in obstetrics, for hospital service as well as for field work, giving home and clinic instruction, and public health centres have been established to improve prenatal and post-

natal care, including nutrition. Funds have been made available to provide assistance to medical and nursing staffs in school health programs, taking and recording heights and weights, testing vision, etc.

One province has set up a Crippled Children's division and another provides treatment and rehabilitation of crippled children on a province-wide scale. To be used as a national centre for the training of technicians as well as treatment, a centre for cerebral palsy cases has been established.

In addition, three provinces have projects concerning the registration of crippled children and others have set up centres for the treatment of such handicapped little ones. Two projects have provided equipment for the making of appliances, including the training of brace makers, and five projects have been launched to provide equipment for the treatment of crippled children in the orthopaedic section of hospitals.

Other projects provide treatment, rehabilitation and appliances for polio cases, on a province-wide scale and still another makes available mobile units for remote areas. The federal funds have also made possible the transportation of children from homes to clinics for treatment, and the study of rheumatoid arthritis conditions in children, covering diagnosis, treatment and services.

### Activities

The Child and Maternal Health Division engaged in an active drive, in co-operation with other agencies, to reduce child and maternal mortality and morbidity and employed all media for enlisting the public's support.

The division assisted the Directorate of Health Insurance Studies in respect to administration of the National Health Grants, such as those for Crippled Children's work and the Public Health Grant where it related to maternal and child health.

Wide distribution was maintained of the book *The Canadian Mother and Child*—approximately 10,000 copies being sent out each month. Copies were sent on request as far afield as New Zealand, British West Africa, India, England, Ireland, Belgium, Switzerland, Czechoslovakia, Syria and Turkey. The French edition of the book was brought into line with the English copy, which was revised to some extent last year.

More than 111,000 copies of the card *Daily Diet for Mothers*, which continued to assist medical practitioners, public health nurses and clinics, were distributed this year.

The Director reviewed the French text of *Up the Years—the Child from One to Six* and material for departmental radio plays dealing with child and maternal health, while the folders on *Poliomyelitis* and *Ten Points to Remember* were revised.

Talks were given to students at the University of Ottawa and University of Montreal and to visiting nurses from the Carleton County Health Unit.

The Director attended the annual meeting of the Canadian Medical Association at Saskatoon, and took part in a round-table conference on breast feeding, later preparing an article for publication on this subject.

The Director also attended a meeting in Washington concerning the definition of "live birth" and "still birth", and took part in the first annual meeting of the Canadian Foundation for Polomyelitis. He also attended the annual meeting in Montreal of the Canadian Council for Crippled Children.

Consultations held during the year included discussions with the Director of the Section on Public Health Administration of the School of Hygiene, Toronto, with the Deputy Medical Officer of Health, Toronto, concerning school medical examinations and the carrying out of services among school children with regard to growth and development, and with British Columbia health authorities concerning the final report on Wetzel Grid studies.

The Nursing Consultant visited hospital training schools in Montreal and Quebec, participating in discussions there. She attended the annual meetings of the Registered Nurses' Association of the Province of Quebec, and of the Canadian Public Health Association at Halifax, visiting nursing services in New Brunswick on the latter occasion.

The Nursing Consultant co-operated with the Metropolitan Health Committee, Vancouver, in a study of premature births. This had to do with 200 mothers of premature babies, the intention being to discover, if possible, if there were factors common to such cases, in the hope that such information might prove valuable in efforts to lower the incidence of premature birth.

Statistics concerning child and maternal mortality in Canada in the period 1926 to 1948 inclusive, will be found in Table 1, page 112.

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## CIVIL AVIATION MEDICINE

Activities of the Civil Aviation Medicine Division made distinct contributions again this year to the establishment and maintenance in Canada of sound health and safety factors in relation to flying.

Several projects were initiated in the division's capacity as adviser to the Air Services Branch of the Department of Transport. Physical standard requirements were established and administered for the Superintendent of Air Regulations of that department, as the division continued to report upon the physical fitness of all types of pilots for civil flying licences.

While administering the pilot medical examination service for the Air Regulations Section, the division advised the Department of Transport generally, and more specifically its Civil Aviation Division, on such matters as related to passenger and aircrew safety, comfort and health; it advised airline or non-scheduled operators on problems relating to the physical fitness of their crews as well as on phases of operations affecting the welfare of passengers and crew; it represented Canada at international aviation meetings and it initiated research, for study by the Defence Research Board and the Royal Canadian Air Force Institute of Aviation Medicine, in projects directed towards improving conditions of flight.

### *Aviation Medicine Training*

Two groups of approximately 30 physicians each, appointed by the Department of Transport as Civil Aviation Medical Examiners, were given a six-day course in Civil Aviation Medicine at the R.C.A.F. Institute of Aviation Medicine in Toronto.

The curriculum was about equally divided between the theory and physiology of aviation medicine, on the one hand, and the practical application of this specialty in regard to pilot examination, crash investigation and indoctrination of pilots and the public on the other.

Lecturers and demonstrations were supplied equally by the R.C.A.F., either Regular Force or Reserve, and by the special consultants of this division.

The object of this training was to give these examiners a broad concept of the scope of aviation medicine, some idea of the part it plays in safe air operations and, more important, to assure a more discerning assessment of pilot physical disabilities in relation to flight duties.

### *Regional Consultant Boards*

Authority was granted in May to establish Regional Medical Consultant Boards in seven cities across the country, the function of these boards being

to provide specialist advice to the Civil Aviation Division on borderline cases of physical disabilities thought incapable of entirely equitable assessment at headquarters.

Since the majority of cases appearing before regional specialists are expected to concern older pilots in whom a gradually-increasing physical defect has been reported, and whose whole economy is based on their fitness to continue flying, most painstaking investigation and assessment will be made, in the interest of all concerned.

#### *Audiometric Survey*

Because it has become apparent, over the past two years, that there is an inordinately high incidence of deafness among pilots holding the higher level types of licences, and since this may conceivably be due to the vibration or noise, or both, to which the pilot is subjected, a survey by pure tone audiometric screening of all airline transport and commercial pilots was initiated by the division.

Where possible, use is to be made of previous R.C.A.F. audiometric records, and the approach of studying present hearing ability against the background of professional flying careers is hoped to build up a framework around which practical and realistic standards of hearing for commercial and airline transport pilots may be evolved.

#### *Airport Emergency Procedures*

The division was requested by the major airline operators and the Department of Transport to co-ordinate efforts of various agencies which would be called upon to act in a major airport disaster. The Canadian Red Cross signified willingness to participate in the development of this scheme and the program was advanced to the stage where a final pattern of procedure for all the larger controlled airports could be drawn up.

#### *Statistics*

Scope of the division's activities during the year is indicated by the following statistics.

Total medical assessments .....	8,983
Applicants rejected—	
— eye .....	40
— colour perception .....	55
— ear .....	4
— cardiovascular .....	15
— others .....	26
Total medical assessments for applicants for Air Cadet	
Scholarship Flying Training .....	213
Total electrocardiograms screened .....	903
Specialist examinations for licence issue .....	143
Flight tests .....	14
Licence limitations recommended .....	16
Audiometric recordings .....	138
New examiners appointed .....	26

## CIVIL SERVICE HEALTH

Consolidation and integration seem to have been the keynote of the Civil Service Health Division during the past year, rather than significant new developments. So gradual and quiet has been the process that it is only in retrospect that it is possible to appreciate the progress that has been made, not only in the integration of the various phases of the service into a harmonious, well-rounded whole, but of the division into the department, the government service, the community health and welfare programs, and the various allied professions.

Within the division there has grown a mutual understanding and reliance which enables each to function freely within his own area of competency, and yet in good co-operation with the efforts of others and the total service of the division. There have been many evidences of this development in the handling of employee problems, in the attitudes of staff members, and in administrative planning.

The Health Centre continues to provide a clinical diagnostic and advisory service of a high standard. It enjoys the confidence and co-operation of the medical profession, and it is gratifying to note the increase in frequency with which senior civil servants avail themselves of its facilities for periodic examination and advice on specific health problems. The resultant conservation of health and efficiency is difficult to measure but must be considerable.

In addition to the Health Centre, the division now has fourteen Health Units serving approximately 15,000 employees. Visits to these Health Units average about 9,000 per month. In only two per cent of cases is the employee sent home or not returned to his duties after simple treatment or a brief period of rest.

The quality of this service is gaining recognition from local medical, nursing, and social groups, with whom harmonious relationships have been established. Several of the universities have expressed approval of the service by requesting field work for their public health nursing students. The comments of national and international professional visitors indicate that this health and welfare service for federal employees compares favourably with other industrial and government health services, is an economic and intelligent use of health personnel, and is a worthy segment of the total plan for Canada's health.

The psychological service is now carrying a full work load and the division has received many expressions of appreciation from personnel staff for valuable advice and assistance in personnel and placement problems. The psychologist is concerned primarily with human behaviour. His function is to assist civil servants to more intelligent self-direction and to a better understanding of their personalities, aptitudes, attitudes, and interests in their job relationships. To those with physical, mental, emotional, and social handicaps, he offers help in making the most of these handicaps in the struggle of earning a living. To those who over-estimate or under-estimate their personality and vocational possibilities, he offers guidance for a more realistic approach to job and life adjustment. He reports in part: "It has been most gratifying to note the continual growth in counselling skills and techniques shown by the Nursing Counsellors in the field of personal relationships. Many cases well within the scope of the Nursing Counsellor formerly referred to me are now being handled by the Nursing Counsellors."

In one out of every seven visits to a health unit, some form of social service is required. The reason for the visit may be the discussion of personal health, but the major precipitating or contributing factor is, in those cases, a mental or social one requiring special service. Supplementary anal-

ysis of services maintained since May, 1949, shows a steady increase in these special cases. This increase is partially due to the increasing volume of visits to the Health Units, but it also reflects the growing confidence of employees which prompts them to discuss their personal and family problems and requires a considerable increase in the health teaching and counselling being done by the Nursing Counsellors.

The proportion of females requiring such service is only slightly higher than that for males. Nutritional problems, serious handicaps, mental health, and family health, are the most important causes numerically and it is of interest to note that, in the division's experience, alcoholism and immoral conduct are not significant problems.

There has been some reorganization of the Certificate Review Section which is resulting in more economical use of the time of the professional staff. It is hoped that it will also result in a more satisfactory and expeditious reporting service to employing departments.

During the year selected members of the divisional staff have been called upon for special advisory service of both departmental and interdepartmental nature to such an extent as to cause some embarrassment in administration. Unless these demands become more frequent or more onerous, however, no immediate staff changes are expected.

Considerable progress has been made in the interpretation of the division's functions to employees and administrative staff. There still remains, however, much scope for education of junior and intermediate supervisors in the intelligent use of a modern health service and for the simplification of re-assignment when unsuitable employment is discovered to be the cause of deterioration in health or efficiency.

## Summary of Services Rendered

### (a) Health Units

At the close of the fiscal year ending March 31, 1949, 12 Health Units providing a health coverage for 13,500 civil servants had been established on a geographical basis within the Ottawa area. Two additional health units, one in the Woods-Canadian Building known as No. 2 Health Unit, and one at the Sussex and John Street area known as No. 16 Health Unit, were opened during the year, making a total of 14 Health Units in all, serving just over 15,000 employees in the Ottawa area. It will thus be observed that more than half of the civil servants in the Ottawa area are being provided with health coverage, including Nursing Counsellor service.

Eleven Nursing Counsellors have been appointed during the fiscal year, and there were four resignations, which resulted in a net increase of seven Nursing Counsellors to the staff. In all, 33 Nursing Counsellors, under a Chief Supervisor and an Assistant Supervisor of Nurses, are employed by this division to fulfil the staff requirements of the 14 functioning Health Units.

Visits made to the Health Units throughout the fiscal year, by months, sex, nature and classification of visit, and disposal, are summarized in Table 2, page 113. It will be seen that 105,439 visits were made to Health Units, with a male to female ratio of approximately 3:4. This ratio is of particular significance in view of the sex distribution of the civil service employee population in the Ottawa area, namely, males 53 per cent and females 47 per cent. Approximately 75,000, or 70 per cent of the grand total, were recorded as first visits or visits resulting from new disabilities. The remainder were repeat visits to the Nursing Counsellor for further treatment or investigation of some previously reported condition. Some

40,500 visits were due to minor illnesses; 10,675 to minor accidents; 12,000 for consultation with the Nursing Counsellor concerning some health or welfare factor; and 4,234 visits were classified as "return to work" visits, that is, a visit following an absence on medical grounds.

Respiratory, digestive, menstrual disorders, and diseases of the skin and cellular system, in that order, are the predominating causes of visits to the Health Units. The ratio of respiratory to digestive disturbances over the entire fiscal year was 2:1, a ratio similar to that experienced during the two previous years. The seasonal fluctuations, both in total monthly visits to the Health Units and in the incidence of respiratory and digestive disorders, is of particular significance and is clearly shown in Table 2. Respiratory diseases are much more prevalent in the latter six months of the fiscal year. Digestive disturbances reach their peak during the warm summer months when respiratory diseases are at their lowest level. No serious outbreaks of communicable disease were reported during the period under review. The extremely low percentage of employees (2 per cent) who were sent home following a visit to the Health Unit has been previously commented upon. These and other interesting observations are apparent from a study of Table 2.

(b) *Health Centre*

A consolidated summary of the work conducted at the Health Centre of the division is presented in Table 3, page 114. In all, 4,611 employees were referred to the Health Centre for examination, consultation, or treatment of emergencies by the staff physicians and consultants. In addition, the divisional psychologist conducted more than 150 consultations on employees referred to him by the division's staff physicians, nursing counsellors and departmental personnel or administrative officers.

More than 2,500 X-rays were taken, of which over 80 per cent were chest films, either routine miniature or standard 14 x 17-inch films. The remainder were taken for a variety of conditions, usually as a result of injury or accident. The volume of X-ray work handled was considerably less during the past fiscal year in view of the mass community chest X-ray survey conducted throughout the City of Ottawa in the fall of 1949. This survey made unnecessary the number of smaller departmental surveys formerly carried out by the X-ray facilities of this division. Approximately 3,500 laboratory procedures were conducted by the clinical laboratory at the Health Centre.

(c) *Certificate Review Section*

This section is responsible for the review and processing of all medical certificates of disability for duty received from across Canada, and the review of all medical examination forms in connection with the application for permanency and superannuation (Schedule "J"). In all, 55,584 disability certificates were received for review and processing. Medical officers of the division reviewed and made recommendations on 9,342 applications for permanency.

All relevant statistical information from the above disability certificates on sickness absenteeism was collected for tabulation and analysis by the Dominion Bureau of Statistics. In this connection it is desired to pay tribute to the Dominion Bureau of Statistics for invaluable assistance in the compilation and preparation of this statistical data on sickness absenteeism in the Civil Service. The results of this analysis will be included in a special report to be prepared by this division at a later date.

Retirements from the government service for medical reasons, by cause of disability and age group during the past fiscal year, are shown in Table 4,

page 115. Of 183 separations almost 80 per cent have occurred between the ages of 50 and 60 years. Diseases of the circulatory system, bones and organs of movement, and diseases of the nervous system, in that order, are the three chief causes of separation on medical grounds from the government service.

### Associated Activities

The opening paragraphs of this report have made reference to a variety of activities, both departmental and extradepartmental, in which the division has taken an active part. Several other activities are worthy of mention.

In the fall of 1949, the Ottawa Anti-Tuberculosis Association and the Kinsman Club of Ottawa, in co-operation with the City Health Department and the Division of Tuberculosis Prevention of the Ontario Department of Health, conducted a voluntary mass chest X-ray survey of all Ottawa citizens. This division played an important role in planning and organizing participation of the government employee population in this survey. Some 24,408 employees, or 95 per cent, were X-rayed. It is exceedingly gratifying to record that the incidence of pulmonary tuberculosis has fallen since 1944, when the last survey was conducted in the Civil Service, from 1.98 per cent to 0.45 per cent, a reduction in incidence of over 75 per cent.

Early in the fiscal year the division instituted a program of periodic health examinations, including X-ray and certain immunization procedures, for personnel of the Department of National Health and Welfare engaged in duties which involve a definite and substantial exposure to tuberculosis or other diseases and infections as part of their regular work. This program included physicians and nurses engaged in clinical or laboratory work, hospital and nursing station personnel, X-ray, and laboratory technicians, and other groups exposed unduly to occupational hazards. Employees of the Indian Health Services, certain personnel in the Quarantine, Immigration and Sick Mariners Division, and the staff of Hygiene Laboratories are chiefly concerned in this program which commenced to operate in September, 1949.

Finally, it is desired to mention the preparation and distribution of a folder entitled, *A Health Service for Federal Government Employees*. This folder, designed to provide information for directors, chiefs, and supervisors of government departments, has proven a most useful medium for the dissemination of knowledge concerning divisional activities and the means by which the health service can best be utilized.

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## DENTAL HEALTH

Since the use of preventive methods, beginning in early childhood, holds out the only hope of overcoming dental disease, the Dental Health Division continued to devote itself extensively to public education and research.

It found that, while some useful preventive procedures are known, there was urgent need for further research in this field. The situation in Canada is such that it is physically and financially impossible to meet the existing need for fillings, straightening of irregular teeth, treatment of gum diseases and for dentures. Even if the number of dentists could be doubled immediately and their total combined efforts directed to caring for the elementary school children alone, it is estimated that it would take nearly a year to catch up with the backlog of dental treatment needs of only that one group.

New educational material provided during the year included: a colour film and two colour filmstrips for use in elementary schools, a series of six

coloured teaching posters for schools, two illustrated booklets for school use, a four-page coloured supplement for *Canada's Health and Welfare* and several articles in that and other journals. In addition, several addresses were delivered before professional and other bodies.

The two-year demonstration project, in which intensive two-day lecture and clinical courses for dentists in dentistry for very young children were operated in nine of the ten provinces, was concluded successfully at end of the year. Its purpose was to stimulate interest in this work and to provide refresher training for dentists who had graduated before dentistry for children was taught in universities as intensively as at present.

A specialist in dentistry for children, Dr. S. A. MacGregor, was employed on a part-time basis and an itinerary was set up with the co-operation of provincial dental associations and departments of health. As this was a type of professional education, it could not be continued properly as a function of the department, and was, therefore, regarded solely as a demonstration program.

During the year, also, further research was carried out at Stratford, Ont. into the effects of naturally fluoridized water upon periodontal tissues. Clinical assistance was provided for the Nutrition Division in connection with survey work and consultant service was furnished to other divisions.

The division found satisfaction in the fact that four more provinces set up Dental Health Divisions during the year, making a total of six having such services. In September 1945, only one province had such an establishment. At least two more are expected to be set up shortly.

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## EPIDEMIOLOGY

Activities of the Epidemiology Division were three-fold. Epidemiological studies to be made by the provinces were discussed and stimulated through contact with provincial epidemiologists, the division co-operated with other divisions of the department, with other government agencies and with universities in carrying out studies of an epidemiological nature, and up-to-date charts and graphs were kept of the incidence and prevalence of communicable diseases as they were reported.

At intervals, conferences were held with Quebec and Ontario epidemiologists concerning studies of a field nature and plans were drawn up in anticipation of future activities. Similar conferences will be held with all provincial epidemiologists.

The division was concerned, also, in the making of plans, instruction of enumerators and printing of forms and other material for a sickness survey to be conducted in the provinces. This survey, to be carried out on a country-wide basis, and including monthly visits to the same families over a period of a year, will be the first of its kind ever attempted anywhere. It will provide figures showing expenditures for medical care and the incidence and prevalence of certain illnesses, as well as relevant social economic data with respect to the families under study. Neither Canada nor the individual provinces now have such precise information, which is important and has many uses.

Without such detailed survey, data required could be obtained only by assuming that figures for this country's sickness were the same as those of the United States or Great Britain. The sickness survey will provide figures of the greatest value in health planning.



Surveys assessed the dental, nutritional and other conditions of little Canadians.

The Epidemiology Division co-operated with other divisions of the department and with the Province, in a health survey, including a study of health facilities, in Newfoundland, and information obtained was supplied to the province to assist in its health planning.

The East York-Leaside Morbidity study started last year, in conjunction with the University of Toronto, was continued and the division again provided technical services as required.

In co-operation with the Department of Agriculture, a paper was prepared on *Brucellosis* in Canada, and was presented at a meeting at Bethesda, Maryland, of persons interested in this disease. It aimed to present a picture of this disease as it exists in Canada, in order that plans for its control and eradication might be made on a joint basis with the United States.

An information service on diseases was kept up-to-date throughout the year. Articles and extracts of interest to persons in scientific work throughout the country were forwarded to them as required. This service has proven of great value to other divisions of the department in the preparation of studies and drafting of projects.

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## HOSPITAL DESIGN

Assistance was given by the Hospital Design Division to the directorate of Health Insurance Studies in the administration of the Hospital Construction Grant funds provided under the National Health Program.

All plans for proposed building projects were reviewed and, in many instances, suggestions were made for improving designs. In some cases explanatory drawings were provided to authorities proposing the work. The amount of federal assistance appropriate for hospital construction projects was also determined and calculations were made for proportional grants.

At the same time, this division provided consultation to the department on planning problems and produced drawings where required.

At the request of the Minister of Health of Manitoba, the Chief of the Division compiled a confidential report on the physical plants of twelve hospitals in that province, with recommendations concerning each.

During the year the Chief of the Division received numerous invitations to address professional groups on his specialty. Addresses on problems of hospital design were given to the Maritime Hospital Association and the Canadian Hospital Council and, on fire prevention in hospital design, to the Association of Canadian Fire Marshals.

A paper entitled *Alterations, Additions and the Architect* was presented to the Western Canadian Institute for Hospital Administrators and Trustees and papers were read on the principles of design and construction of hospitals at the Alberta Hospital Association convention.

Hospital planning and construction was the subject of a day's lecture to students taking a hospital administration course at the University of Toronto. A day was also spent with the architectural students at the University of Toronto in criticism of hospital planning projects.

The Chief of the Division also acted on a board of judges in an architectural competition held in the United States for a *Small Hospital*. The Department considered this a signal honour, since its representative was the only member of the board of judges not practising in the United States.

## INDUSTRIAL HEALTH

Agencies designed to maintain good health in industry continued to play an appreciable role in the economic and social development of the country. The wealth and standard of living of Canadians is dependent, to a large extent, upon the productive capacity, skill and ingenuity of the more than 5,000,000 people—over one-third of the population—gainfully employed in a wide range of industries, trades and services.

The Industrial Health Division assisted and co-operated with the provinces with a view to the establishment and co-ordination of an effective national industrial health program through maintenance of: medical and nursing consulting services for promoting and improving industrial medical programs and appraising industrial health problems; laboratory services for research and surveys and investigations of industrial health hazards; educational and technical information services for promoting personal and plant health practices, and advice and assistance to the provinces in the establishment of appropriate industrial health measures.

Technical assistance was given by the division to federal departments, such as: advice to the Department of Agriculture in connection with human toxicology of insecticides, required to license the various products under the Pest Control Products Act; health supervision of radioactive materials distributed through the Atomic Energy Control Board; advice and assistance on occupational and environmental industrial health hazards, to the Civil Service Health Division of this department, and also to other departments, such as Labour, Mines and Technical Surveys and National Defence.

Through study and research, discussions and exchange of views with industrial health agencies and industry, and by the maintenance of a progressive reference bibliography, the division collected, collated and disseminated up-to-date informational material with respect to occupational and environmental health problems.

### Medical and Nursing Services

The clinical assessment of health problems being of prime importance in ensuring a healthy, well-adjusted working force, the division continued to provide medical and nursing consulting services for the appraisal of health problems in industry.

Through addresses to professional and industrial audiences and by numerous articles in technical and lay publications, the medical and nursing staffs of the division outlined the benefits to be derived from a comprehensive industrial health program in industry, embracing preplacement and periodic medical examination, with vocational guidance and rehabilitation, early and efficient care for occupational accidents and illness, emergency care for non-occupational complaints, health education and counselling, medical and engineering control of occupational hazards and the supervision of other facilities associated with health.

During June and July, personnel from the division assisted with an industrial health survey of industry in New Brunswick, a necessary step in the development of a provincial industrial health program. The survey was a joint project with the New Brunswick departments of Health and Social Services and Labour. Data were collected from plants engaged in mining, manufacturing, and storage, and from laundry and dry cleaning establishments; 45 per cent of the 453 plants of eligible size in these groups were surveyed. The report on this survey, now ready for distribution, provides

information on the scope of the problem in New Brunswick. It includes conclusions and recommendations arising out of information gathered during the survey.

A highlight of the year was the distribution of a reference manual for physicians on occupational disease. This manual was compiled jointly by the staffs of this division and the Division of Industrial Hygiene of Ontario and has been well received by professional personnel in Canada and abroad. One of the foremost British medical journals commented upon it: "Nearly all that is worth knowing about industrial medicine and toxicology is adequately dealt with in the 200 pages."

Technical assistance and information were provided in answer to many requests received from governmental and industrial sources. These inquiries asked for information on subjects such as health problems in lighting, germicidal ultra-violet rays, working conditions generally, hazardous chemicals and toxicological data on lead, beryllium, cadmium, tellurium, arsenic, and so forth.

Preliminary investigations were carried out on a condition known as "seal finger", which affects seal fishermen and is a widespread and disabling condition in certain coastal areas. This investigation is continuing.

The senior nursing consultant assisted in educational programs relating to industrial nursing at several universities and a progressive program in this field has been developed for the future. Placement and recruitment of nursing personnel for industry were actively carried out, with considerable success.

During the past year members of the staff published papers in various professional journals and gave addresses on health problems in industry at university meetings, public health gatherings and medical and scientific conventions. The staff also participated in conferences of various professional bodies in the United States. The division was represented on many executive committees dealing with industrial health problems.

### Laboratory Services

Laboratory facilities of the division were applied toward technical solution of health problems having their origin in the working environment of the Canadian employee and were combined with the medical and educational approaches to provide a broad co-ordinated attack on the causes of ill-health among wage-earners.

With reference to environmental studies conducted in the industrial health field in co-operation with provincial authorities, industrial health work was supplemented by investigational and analytical activities in the Ottawa laboratory.

The division's X-ray Geiger counter spectrometer operated for the second year on the evaluation of silicosis-producing dusts in the air of factories, mines and foundries. The first such instrument in the world to be devoted wholly to health control, its cost was less than compensation for a single silicosis case.

A new high-speed polarographic method for determining lead in urine and air was set up and employed with success in the fight against one of the oldest and most intractable of compensable diseases. The methyl bromide detector, developed and patented last year, was applied successfully to the detection of two new important industrial hazards, trichlorethylene vapour and carbon tetrachloride vapour.

Environmental service in conjunction with efforts to ensure a high level of health in the public service was extended to the department's Civil Service Health Division. This included surveys of lighting and noise conditions, analyses of urine for lead, and dust measurements in a government laboratory engaged in work with silica materials.

Laboratory staff served on the Safety Code Correlating Committee of the American Standards Association and the association's sub-committee on Maximum Allowable Concentration of Toxic Materials in Air. This representation was on behalf of the Canadian Engineering Standards Association. In addition, the laboratory staff acted on the Safety in Refrigeration Committee of the Canadian Standards Association and upon the Insecticides Committee of the Canadian Government Purchasing Standards Association.

Consultant service was rendered to the Northwest Territories Council in connection with the hazard to the health of arsenic-bearing roaster fumes from mining operations at Yellowknife.

In the division's role of consultant in pesticide toxicology, to the Dominion Department of Agriculture, the laboratory prepared current evaluations on new technical insecticides such as parathion, D.D.T., aldrin, and dieldrin. Additionally, the laboratory staff acted on the Washington Respirator Committee of the United States inter-departmental sub-committee on Pest Control, in connection with the selection of performance standards for respiratory protective devices to be employed by those exposed to parathion in the field. A wide variety of technical advice was given to the Department of Agriculture in connection with applications for license of such products under the Pests Control Products Act.

### **Educational and Technical Information**

The division prepared and distributed educational and technical information on industrial health practices. This material was distributed to professional personnel concerned with the health of workers and to management and labour groups. In carrying out its comprehensive program of health education, the division kept all sectors of industry informed of established procedures for maintaining a safe and healthful working environment. It also distributed information on new conditions, processes and materials which might affect health.

Distribution was continued of the monthly *Industrial Health Bulletin*, which contained articles on a wide variety of industrial health subjects. The Bulletin was supplied to all Canadian establishments having more than 15 employees, to 2,000 trade unions, to governmental and professional agencies and to many interested individuals. Many of the Bulletin's articles were reproduced in other journals and a large correspondence with industrial and labour groups was a significant feature of this project.

Two issues of the *Industrial Health Review* were distributed during the year. This publication was directed towards professional and technical personnel working in the field of industrial health and was technical in character. Of each issue, 10,000 copies were distributed to physicians, industrial nurses, public health organizations, industrial chemists and engineers and others interested in the maintenance of a high standard of health among the working population. Considerable correspondence in connection with the *Review* indicated that this publication was providing a much-needed medium for the interchange of views on industrial health matters.

When the manual *A Guide to the Diagnosis of Occupational Diseases* was distributed, it was very well received and favourable reviews appeared in many technical and professional publications.

During the year, six posters on general industrial health topics were distributed as inserts in the *Industrial Health Bulletin*. These posters have been reproduced in several technical journals as poster suggestions for other industrial health organizations.

## LABORATORY OF HYGIENE

The program of National Health grants, particularly the Survey Grant, began to concern the Laboratory of Hygiene closely during the year. Four of the provinces requested the services of the Laboratory to assist them in surveying their public health and hospital laboratory facilities.

New Brunswick, the first province to make such a request, asked for a program for the orderly expansion of its laboratory services to cover approximately a ten-year period. Since this was a new activity, it was undertaken by the Chief of the Division and latterly with the assistance of a competent laboratory research worker.

Such surveys become highly complex, technical studies involving such questions as the precision of techniques carried out in various laboratories, the qualifications and suitability of personnel and the adequacy of space and equipment. Careful consideration must be given not only to the current responsibilities but also the future relationships of the laboratory to diagnostic and therapeutic medicine.

A similar survey has been started for the Province of Saskatchewan, and requests have been received for studies in Prince Edward Island and Newfoundland.

These survey activities emphasized that the Laboratory of Hygiene, which serves as the National Public Health Laboratories, must be thoroughly familiar with hospital laboratory diagnostic procedures particularly in the fields of biochemistry, bacteriology and haematology. To that end, and in order to provide specialists familiar with the real day-to-day problems, arrangements were made with an Ottawa hospital for members of the staff to work in the hospital laboratories studying specific problems. The results of such studies will be made available to all Canadian institutions.

The Laboratory of Hygiene co-operated with other divisions of the department and continued collaborative investigations with the Divisions of Nutrition, Dental Health, Public Health Engineering, and Epidemiology. The Laboratory continued to act in an advisory capacity to the Director of the Food and Drug Divisions in respect to safety, potency and therapeutic efficacy of drugs, such as serums, vaccines, toxoids, antibiotics and disinfectants.

### *New Facilities*

A new section—the “Canadian Tumour Registry”—was brought into service during the year. This new activity, suggested by the Technical Advisory Committee on Public Health Laboratory Services, was undertaken in collaboration with the National Cancer Institute.

Plans have been completed for a new virus research building to be located in Ottawa, and it is hoped that construction will be started during next year. So far, the Laboratory of Hygiene has been unable to study some of the virus infections of great importance to Canadians, because of the lack of suitable quarters which would enable virus workers to handle safely such infectious agents and to protect themselves and other workers. Despite the lack of these facilities, much useful work has been conducted.

For many years the department has realized the total inadequacy of the laboratory facilities in the Western Branch at Kamloops, B.C., of the Laboratory of Hygiene, which is responsible for laboratory work in connection with the study of such diseases as Rocky Mountain Spotted Fever, Sylvatic Plague and some of the virus diseases of particular concern to Western Canada.

During the past year an agreement was completed with the University of Alberta for the lease of a four and a half acre site on the campus of that uni-

versity. Plans for a new, thoroughly modern, laboratory building have been completed and it is anticipated that construction will be undertaken next year. The location of this laboratory on the campus of the University of Alberta will make available to the department the full facilities of the University hospitals, teaching departments, research divisions, etc., and will thus provide the level of co-operation essential in this field.

For some ten years the Laboratory of Hygiene has operated a mobile trailer laboratory, particularly for the study of sanitary problems affecting the Canadian shellfish industry on the Atlantic coast. This mobile laboratory having outlived its usefulness, a new bus type unit has been ordered to take its place.

About two years ago, co-operative plans for further studies of shellfish sanitation problems were completed in co-operation with the United States Public Health Service (Marine Biological Station, Wood's Hole, Maine). There are a number of problems of real importance to the Canadian fishing industry, problems which also face the industry in the United States. The Laboratory of Hygiene can therefore perform a most practical function by making every effort to protect and expand the Canadian shellfish industry by studying the public health problems which are of concern to both countries.

### *Thirty Years Forward*

Looking back over some thirty years of existence, the Laboratory of Hygiene took stock this year of developments in that period. It noted that, in a letter written under date of March 2, 1921, to the Minister of Health, the then Deputy Minister, Dr. John Amyot, drew attention to the fact that the Act respecting the Department of Health authorized "the establishment and maintenance of a national laboratory for public health and research work".

He drew attention to the many requests which had been forwarded from various lay bodies interested in public health, from the medical associations of the provinces, medical councils, and the various Boards of Health, and stated: "In fact this (the establishment of national laboratories) was the outstanding factor, the centre around which they knew so well such a department would of necessity functionate, where the facts could be tested that would make a Department of Health operate intelligently".

In his letter Dr. Amyot outlined the work of the division as he saw it.

- "(a) To inspect places of manufacture and investigate and certify to the purity, stability and standardized strength of chemical products used medicinally, particularly those of highly complex nature (e.g. Salvarsan) which are administered directly into the systemic organism hypodermically, intramuscularly or intravenously.
- (b) To make similar inspection, examination and certification in reference to potential biological products used in similar ways, such as vaccines, antisera, antitoxines, serological cancer treatment materials, etc., etc.
- (c) To make investigation into diseases especially peculiar to our own country or those modified by our own condition.
- (d) To carry on investigation in looking to correction of the conditions producing ill health and disease amongst workers in the trades, and in rural and urban localities—e.g. gas-poisoning, dust-poisoning, production of deafness and blindness, diseases such as glanders and anthrax, etc.; preservation and protection of food, water supplies, sewage and water disposal, use of by-products, ventilation of dwellings, etc.
- (e) To encourage effort by teaching the members of the professional staff of the department and other such departments as the Army Medical Service, so that they, too, will be able in their various assignments to

observe and record their scientific observations. Some of the finest work done in research in the U.S.A. Service evolved out of work begun in their Public Health Service Laboratories—Yellow Fever and its control, control of Malaria, Hook-worm control, milk investigations, world-wide accepted standards in biological products and out of their departments professors and workers in many scientific fields have been developed.

- (f) In conjunction with the universities, to carry on in the universities special investigations in which the universities are able to supply the facilities necessary in the shape of laboratories and special apparatus, which would be very costly if got together specially for the investigation in hand".

Item (a) has to do with the control of arsenical drugs and became the responsibility of the Food and Drug Divisions when the Section of Pharmacology of the Laboratory of Hygiene was transferred to the Food and Drug Divisions some four years ago.

Item (b) has been, and remains, one of the major activities of the Laboratory of Hygiene.

Item (c)—several investigations of the kind outlined are being carried out particularly in respect to virus diseases and enteric infections.

Item (d)—the majority of these activities are carried out by either the Industrial Health or Public Health Engineering Divisions of the department.

Although Item (e) has been largely taken over by universities, the Laboratory of Hygiene has an active program for the training of highly specialized workers in fields such as syphilis serology and parasitology, and training courses in other fields will be established in the near future.

Finally, under Item (f), Dr. Amyot envisioned a co-operative program with the universities. This program has been under way for some three years with such institutions as McGill University, University of Toronto and the University of Alberta, and the Laboratory of Hygiene is looking forward to more extensive co-operation, not only with universities but with provincial departments of health and other agencies.

Dr. Amyot's report is considered remarkable in that the real objectives of a laboratory division and the objectives which he set forth are as sound today as they were thirty years ago, although, in fact, the department has not yet fulfilled in all detail the plan outlined in those earlier days.

### *Staff*

It was demonstrated again this year that the Laboratory of Hygiene was fortunate in being staffed by competent, enthusiastic workers. The high level of scientific work performed would have been impossible without the most complete co-operation of all members of the staff. The Laboratory was still handicapped by a shortage of trained specialists, particularly in the field of bacteriology. Difficulties in recruitment continued to be related to the inadequacy of salaries and to the lack of opportunities for advancement to salary levels commensurate with those available in other fields. This was particularly true in regard to senior staff, having in mind the high degree of specialization and technical competency required.

Details follow of work of sections of the Laboratory of Hygiene during the past year.

### **Section of Bacteriology and Immunology**

One of the major functions of this section being to assist the Food and Drug Divisions in the standardization and control of vaccines, toxoids, sera and analogous products, some 142 specimens of antitoxins, toxoids and similar

products were tested during the year for safety, identity and potency. Of these, 9 lots were rejected. Sterility and safety tests were carried out on 137 samples of various preparations. One lot of dextrose saline solution was found to be contaminated and was removed from the market. Several lots of other products were rejected because they failed to meet the standards maintained under the Food and Drugs Act.

Considerable assistance was rendered to the Canadian Red Cross Blood Donor Service by testing intravenous administration sets, intravenous solutions, distilled water, etc., which are used in blood banks of the various hospitals collaborating with this national organization. About seven per cent of the specimens submitted (342) were found to be unsatisfactory and the proper authorities were so advised.

During the past year, a new product—BCG (anti-tuberculosis vaccine) was added to the list of licensed drugs. Safety, identity and effectiveness of this drug are being actively studied. Two Canadian firms are licensed for the manufacture of this product. Investigations are being conducted in methods of testing and controlling potency, safety and efficacy of many biological products such as tuberculins, typhoid vaccines. Particular attention is paid to the quality of the product used for their preparation.

An inspection of manufacturers' establishments licensed for the preparation of such drugs is carried out regularly and, to date, all those on this continent have been inspected.

*Immunization Studies.* An investigation of the method and materials used for the immunization of children was undertaken in collaboration with the Department of Bacteriology and Immunology of McGill University and the Child Health Association of Montreal. To date, it has been shown that infants three to four months of age give excellent response when they are inoculated with diphtheria toxoid, tetanus toxoid and pertussis vaccine given separately or combined. These results are important, since by early immunization, the mortality due to these diseases may be significantly reduced. Findings to date have been published in the scientific journals.

Further studies are under way concerning the comparison of vaccines manufactured by different techniques and it is planned to conduct a study on the effectiveness of recall or secondary stimulus doses on children about to enter school.

*Oral Immunization.* Studies were made of the use of diphtheria toxoid as a secondary stimulus when given by the oral route. Results obtained in preliminary experiments with guinea pigs were striking and for this reason, human trials have been undertaken. The clinical trials are being carried out in collaboration with McGill University, the Child Health Association of Montreal, and the Connaught Medical Research Laboratories of the University of Toronto.

*Enteric Bacteriology.* The National Salmonella Reference and Typing Center received 336 cultures for identification. A new type of Salmonella, isolated by Dr. C. E. Dolman and associates in Vancouver, was identified in the Salmonella Reference Center. The Center prepared and distributed to provincial public health and D.V.A. laboratories some 204 liters of standardized suspensions for use in the Widal test. Other diagnostic reagents were supplied as required.

*Diphtheria and Haemolytic Streptococci.* The laboratory continued to provide a service for the identification of diphtheria and haemolytic streptococci and other group organisms. During the year, 220 cultures were submitted for identification. In addition, many requests for special strains of these organisms were received and the cultures supplied.

*Shellfish Sanitation.* Bacteriological surveys of oyster-and-clam producing areas were conducted during the year and the mobile laboratory was used for five months, studying many of the problems which arise in this industry. A large number of samples of shucked shellfish imported from the United States were examined and a high proportion of them rejected as being of unsatisfactory quality. During the year, a meeting of the Interdepartmental Shellfish Committee was held, at which time representatives of the United States Public Health Service were present and tentative standards acceptable to both countries were prepared.

*Mussel Poison.* As in previous years, a close check was kept on the toxicity of clams and mussels harvested on coastal areas. This was a collaborative problem involving the Department of Fisheries, the Fisheries Research Board, the Province of British Columbia and the Laboratory of Hygiene. A close check was also maintained on the safety of commercially canned clams and 550 samples representing 268 packs from 9 commercial canners were tested. One pack was rejected because of toxicity.

*Parasitology.* Surveys to determine the incidence of trichinosis and amoebic dysentery in Canada were undertaken. Human diaphragms from 85 post-mortem cases in British Columbia were examined for the presence of trichinosis and approximately 6 per cent were found to be infected. The Western Branch submitted 1,400 tissues from wild rodents, 7 per cent of which were found to be positive for trichina. The percentage of infected rat diaphragms was found to be as high as 33 per cent for those rodents collected in the vicinity of some West Coast piggeries. Studies related to the incidence of amoebic dysentery were conducted in collaboration with the local hospitals. A training program for provincial laboratory workers is planned and arrangements have been made for a refresher training course next year, available to the personnel of all provincial public health laboratories. Training aids for use in the provincial laboratories have been designed. Several of the provincial laboratories have taken advantage of this service.

### Section of Syphilis Serology

Emphasis was placed by the Syphilis Serology section upon services to the provincial public health laboratories, since, in syphilis serology, certain phases of the work can be performed to advantage in a central laboratory, both from the standpoint of economy and uniformity of results. In this role, the laboratory prepared and standardized reagents (antigens, complement, hemolysin) used in blood tests for syphilis, which are distributed to the provincial laboratories, free of charge. Refresher courses were offered to provincial serologists. Surveys were conducted to evaluate the accuracy of the blood tests as performed in the various provincial laboratories, the Laboratory of Hygiene serving in the capacity of a national reference laboratory.

During the year, activities of the section were widened to include clinical biochemistry and plans were prepared to set up a fully-equipped laboratory for such studies.

*Distribution of Reagents.* Approximately 70 liters of carefully standardized reagents, used in the performance of serologic tests for syphilis, were supplied free to provincial public health laboratories and to the hospital laboratories of the Department of Veterans Affairs. These reagents had a current market value of more than \$32,000 and it was pointed out that this service accounted for only a portion of the time of the laboratory staff.

*Dried Syphilitic Serum.*—With the decreasing incidence of syphilis, some provincial laboratories experienced difficulty in obtaining sufficient amounts of positive sera for test control purposes. The Laboratory of Hygiene, accord-

ingly, collected and dried specimens of positive sera for distribution as needed. It planned to build up a large reserve stock in anticipation of a further decline in the incidence of the disease.

*Refresher Course.*—A second refresher course in syphilis serology was conducted in November and attended by representatives from nine provinces. The course lasted three weeks, two of which were spent at the laboratory. During the third week the members of the group had opportunity to observe the routine performance of tests in the provincial laboratories at Montreal and Toronto. At a later date, a representative from the tenth province spent three weeks at the Laboratory of Hygiene.

*Serological Survey.*—The results of the fourth serological survey were analyzed and summaries of the data obtained were distributed to the participating laboratories. A fifth survey will be conducted next year, at the request of the provincial directors.

*Special Studies.*—Studies of purified antigens have been continued. Since the components of these antigens are isolated from extracts of beef heart tissue, certain difficulties are encountered in obtaining uniform preparations. During the last year, this division collaborated with the Banting Institute, University of Toronto, in an attempt to prepare entirely synthetic antigens suitable for the diagnosis of syphilis.

The correlation of the laboratory findings with the clinical history of the syphilitic patient was continued. In this way, it was possible to assess the efficiencies of new and improved methods, as well as of methods in current use.

The laboratory continued to collaborate with the Expert Committee on Biological Standardization of the World Health Organization in establishing international reference standards for blood grouping sera.

### **Section of Antibiotics and Disinfectants**

A laboratory investigation of fifteen antibacterial chemotherapeutic agents was conducted during the year for the purpose of comparing their effects on microorganisms causing urinary tract infections which have been very difficult to control. Factors such as drug concentration, acidity, presence of urine, presence of blood protein, development of resistance to drugs by the organisms, combination of drugs and toxicity of drugs were considered. Laboratory investigation will be followed by clinical trials with a view to therapeutic application of the results.

In the fall of 1949, an outbreak of diarrhoea in a rural community was investigated by visiting the area and collecting data and specimens. Considerable information on the characteristics of the outbreak was accumulated and an opportunity was also provided of briefly observing some of the results of special treatment. The latter included the use of some of the newer antibiotics. The specimens collected were fast-frozen and returned to the Laboratory of Hygiene immediately for laboratory examination.

In an active control program carried out by this section during the year, more than 3,200 specimens of antibiotics were received and approximately 2,800 tests were conducted. Twenty lots were rejected as failing to meet Canadian standards. Some 250 specimens of disinfectants were tested and 68 of them rejected. In addition, the plants of many of the manufacturers licensed for the production of antibiotics were inspected. A program of research and studies related to standards for the control and quality of these drugs was carried out. A new method for the chemical estimation of crystalline penicillin was published. A number of basic investigations in respect to the mode of action of antibiotics and certain disinfectants were in progress.

## Section of Virus Diseases

During the early part of the year, the laboratory was requested to investigate an outbreak of influenza which occurred in the Eskimos on Victoria Island, N.W.T. A member of the laboratory staff personally investigated the outbreak, collected specimens and aided in treatment. This epidemic caused a fatality rate of 20 per cent and an infectivity rate of 100 per cent among the Eskimos. The clinical and therapeutic aspects of the epidemic were fully studied and the results were published. Specimens were made available to the Connaught Medical Research Laboratories for independent study.

During the late summer an epidemic of non-paralytic type of poliomyelitis occurred in Prince Edward Island and the Laboratory of Hygiene was asked to assist in its investigation. A careful study was conducted and it was found that the epidemic was not caused by a virus of the poliomyelitis group but may have been caused by representatives of a new group of viruses.

A continuous study of cases of influenza was carried out by the Laboratory of Hygiene in collaboration with all the provincial laboratories, the Connaught Medical Research Laboratories, and the Influenza Information Centre of W.H.O. Special shipping containers were constructed for the preservation and shipment of specimens and were located at strategic centres across Canada.

A diagnostic laboratory service for virus diseases has been made available and constitutes one of the major functions of this section. During the past year, some 435 clinical specimens were submitted for diagnosis and a total of more than 2,600 tests carried out. Standardized antigens and reagents were prepared and, as soon as possible, training courses are to be provided for provincial laboratory workers.

## Canadian Tumour Registry

On July 1, the Canadian Tumour Registry indicated that it was ready to receive specimens from all Canadian pathologists. During the first six months of operation, a total of 186 tumours were received from 32 pathologists. A large portion of these specimens was referred to the Committee of Consultants for expert opinion.

The Canadian Tumour Registry was established in the Laboratory of Hygiene as a co-operative project involving the National Cancer Institute and the Department of National Health and Welfare. Dr. Desmond Magner, Professor of Pathology at the University of Ottawa, was named Registrar by the National Cancer Institute. All of the staff, space and equipment are supplied by the Department of National Health and Welfare. The National Cancer Institute also appointed a committee of pathologists to serve as expert consultants in the diagnosis of tumours.

The objectives of the Registry are:

- (1) The collection of pathological material and related clinical data in the field of human tumour pathology. The collection of material from animal tumours used in experimental cancer research. The organization of this material in such a way that it may be made available for study by those concerned in the diagnosis and treatment of neoplastic disease in Canada.
- (2) The provision on request of any Canadian pathologist of the opinions of the Committee of Consultants appointed by the National Cancer Institute.

## Section of Administration

The Administration Section had as its primary objective the saving of the time of scientists by undertaking for them all activities which could be handled by business and clerical staff. During the year, the Work Shop



Specimens of malignant growths, collected, recorded and filed at the National Cancer Institute's Tumor Registry in the Laboratory of Hygiene, assisted pathologists in cancer studies.

carried out 204 projects which resulted in a considerable economy of government funds as well as providing prompt and efficient service to the laboratory staff. The Animal Breeding Colony operated at a high level and supplied more than 17,000 animals for general laboratory use.

### **Western Branch, Kamloops, B.C.**

One of the major activities of the Western Branch continued to be the study of plague infection in the ground squirrels of Western Canada. In southern Alberta, six specimens of fleas submitted from squirrels collected near the towns of Lomond, Cessford and Hanna were shown to be infected with highly virulent strains. In addition, one pool of tissue from squirrels taken near Lomond was also found to be positive. This finding at Lomond constituted a new focus of the infection and the first time that plague infection in ground squirrels had been detected in that area. So far, no evidence of plague infection has been found in the Province of British Columbia. These and other studies are collaborative projects between the various provinces and the Western Branch of the Laboratory. Field collecting crews and equipment are supplied and maintained by the provinces.

*Rocky Mountain Spotted Fever.* Although a number of human cases were reported from southern Alberta and a few suspected cases occurred in British Columbia, repeated attempts to identify the infection in ticks were only occasionally successful. This year some 2,400 ticks collected in southern Alberta and British Columbia were examined but in none was a rickettsial infection demonstrated.

*Tularemia.* Although this disease is widely distributed among Canadian faunae and is frequently encountered in plague studies, this year no signs of the infection occurred in either the ticks or rodent tissues examined.

*Q Fever.* This disease has been reported in many of the United States but has not yet occurred in Canada. Strains of the virus were obtained from the United States Public Health Service Rocky Mountain Laboratory, Hamilton, Montana, and the gross pathology of the disease in laboratory animals was studied in order that the laboratory staff might be familiar with this infection. Each member of the staff was given a series of preventive inoculations of Q Fever vaccine. Further studies of this infection are to be undertaken next year.

*Leptospirosis (Infectious Jaundice).* During the year, 67 live rats were submitted from various localities in the British Columbia coastal area. Nine specimens taken in the Fraser Valley yielded cultures of *L. icterohemorrhagiae*. As this study is continued, attempts are being made to assess the value of the complement fixation test as a means of detecting the infection.

*Rat Bite Fever.* This infection was present in a fairly high percentage of rats found in the Fraser Valley particularly in the immediate vicinity of Vancouver. Human cases were reported and a careful study of the distribution of infected rodents was in progress. A scientific paper was published describing some phases of the investigation.

*Special Services and Diagnostic Antigens.* During the year some 83 special diagnostic tests for Brucellosis, leptospirosis, tuberculosis, tularemia and lymphocytic choriomeningitis were carried out for local physicians, Indian Health Services, Provincial and D.V.A. laboratories. Some of these tests were relatively simple serological procedures requiring but a few hours to complete; others were lengthy biological and bacteriological examinations requiring up to several weeks for completion.

Diagnostic Brucella antigens, sufficient to prepare approximately 50 litres of standard suspensions, were supplied to provincial laboratories. Some 228 cc. of concentrated *P. tularensis* antigen were also supplied to various laboratories.

### Technical Advisory Committee on Public Health Laboratory Services

The annual meeting of the Technical Advisory Committee was held in Ottawa on December 12, 13 and 14, 1949. All the members were able to attend, and Dr. Seward E. Miller, Chief, Laboratory Division, Communicable Disease Centre, United States Public Health Service, was the special guest.

There was a lengthy discussion of clinical laboratory diagnostic services in which it was revealed that the laboratory services available in many hospitals throughout the country were inadequate and presented a serious problem. One of the most important factors contributing to this condition was the acute shortage of adequately trained laboratory personnel. A special recommendation was made by the committee in respect to the inadequate training of many laboratory technicians. The acute shortage of laboratory space in many institutions was also stressed and was the subject of a resolution requesting special federal assistance.

The Laboratory of Hygiene was requested to provide refresher training courses in medical mycology, parasitology and enteric bacteriology. Integration of the activities of the provincial and federal laboratories in bacteriology, serology, virology and parasitology being an important function of this committee, programs of collaborative studies in these fields were reviewed and plans made for the coming year.

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## MENTAL HEALTH

Advice concerning administration of mental health grants provided in the National Health Program, and active educational work in its field made increasing demands upon the small staff of the Mental Health Division. In addition, consultant services were required on a variety of matters.

With the increase in federal grants to the provinces for the extension of mental health services and, ultimately, for the provision of free treatment, an atmosphere of encouragement pervaded this field and there was evidence of substantial progress in some phases of it.

In the fiscal years 1948-49 and 1949-50, the grant to the provinces was \$4,000,000. This is being increased in 1950-51, and increases are to be provided in future years, if the provinces demonstrate ability to use these amounts effectively, until a maximum of \$7,000,000 is reached.

During 1949-50, new projects from all provinces numbered 217, amounting to \$1,576,176.79, and there were 193 renewals of projects submitted in 1948-49, amounting to \$1,394,645.94. A few additional projects were rejected, on various grounds.

Adequate consideration of projects occupied much of the time of the personnel of the Division, since it called for intimate knowledge of existing mental health facilities in each province and appreciation of the lines of development which should be followed in order to lead to the widest insurance of good mental health.

Chief uses to which the provinces have put the mental health grants are: (i) to provide additional staff in mental hospitals, mental health clinics and psychiatric wards in general hospitals; (ii) to provide equipment for these three types of services and (iii) to provide training for personnel—psychiatrists, psychologists, nurses, psychiatric social workers—for the new services.

The amounts allocated from the grant have been divided between the services in the following proportions; 58 per cent for mental hospitals, 11 per cent for mental health clinics and 31 per cent for training and research work.

The Advisory Committee on Mental Health, the constitution of which was reported last year, met during October. Preceding this meeting the subcommittee on research and statistics met and drew up recommendations regarding extension of statistics on mental health.

In addition to consideration of various uses of the Mental Health Grant, the Advisory Committee recommended that a separate subcommittee be set up on research, that the subcommittee on training report on the most effective method of approaching the Royal College of Physicians and Surgeons with regard to the problem of psychiatric training, and the certification of psychiatric hospitals to that end, and that the subcommittee on training approach the licensing bodies to ascertain their attitude towards the setting of an examination in psychiatry as part of the requirement for licence to practise.

### Informational Work

Child training pamphlets produced by this division, through the Information Services Division, continued to be very popular with public health personnel and social workers as well as with parents. Additions were made to the list by the production of new pamphlets on *Thumbsucking*, *Lying and Stealing*, *Nervous Habits* and *Stuttering*. During 1950, six more pamphlets will be added to the child training series on the subjects of *Responsibility*, *Aggressiveness*, *Rewards and Punishment*, *Play and Play Materials*, *Cleft Palate Speech* and *Lisping and Baby Talk*.

A new *School Age Child* series will be published, in English and French, during 1950. The titles projected for this series are, *Bullying*, *Destructiveness*, *Psychological Management of the Sick Child*, *Children's Spending Money*, *Honesty* and *Discipline*. A pamphlet, *Notes on Medical Treatment of the Epileptic Child*, is planned in 1950. Designed for physicians, it will contain the most recent information on the treatment of the various types of epilepsy that occur in children. A pamphlet, *The Home Care and Training of the Backward Child*, produced in 1949, has been widely distributed and well received throughout the provinces.

A third film in the Mental Mechanisms series *Overdependency*, was released in May, 1949. Its premiere showing, in both English and French, was to large audiences at the American Psychiatric Association meeting in Montreal. Through the year, both *Overdependency* and the two previously-produced films, *Feeling of Rejection* and *Feeling of Hostility*, were shown widely throughout America and Northwest Europe and met with great acclaim. A fourth film, *Guilt*, was in production, and will be released during 1950.

In an effort to present to parents the normal emotional development of children, the first film in the Ages and Stages series, *He Acts His Age*, was released during 1949. The film *Why Won't Tommy Eat?* continued to be shown widely.

### Consultant Services

Consultant service was rendered to the Narcotic Control Division, Immigration Medical Service, Hospital Design Division, Civil Aviation Medicine Division and the Indian Health Services of the Department, to the Department of National Defence, the National Film Board, the Department of Citizenship and Immigration, and to the Dominion Bureau of Statistics.

## NARCOTIC DRUG CONTROL

Efforts to stamp out illicit traffic in narcotics were intensified by the Narcotic Control Division, in cooperation with the Royal Canadian Mounted Police and other enforcement agencies, and an increase was registered in the number of convictions obtained for unlawful handling of drugs.

While Canada's known drug addict group remained fairly constant—approximately 3,500 individuals—and while the legitimate trade in narcotics was supervised effectively, an upsurge in smuggling, particularly of heroin, increased the vigilance of officials charged with regulating the importation, manufacture and distribution of the country's narcotics and with suppressing their illicit use.

Special efforts were made to apprehend those connected with bringing in heroin illegally, its distribution by peddlers and use by addicts. In view of the limited amount of heroin imported, it was apparent that little, if any, of the supplies found on the illicit market were in any way connected with the legitimate trade.

It was again evident to enforcement officials that those whose chief source of narcotics was the underworld were paying fantastic prices to satisfy their cravings and were resorting to crime to obtain the necessary money—with consequent heavy economic loss to Canada.

### Crime and Conviction

Of 355 convictions under the Opium and Narcotic Drug Act during the judicial year ended September 30, 1949, there were 336 for illegal possession of drugs, as compared with 238 in the preceding year. There were also 18 convictions for unlawfully selling or offering narcotics for sale, and one conviction for illegally transporting them. Of these convictions, 298 involved heroin.

The great majority of those convicted had police records of varying length. Information available to the Department indicated that most of them were "repeaters". Of 340 persons involved in the 355 convictions, 15 had to be dealt with twice during the year for separate offences.

Sentences imposed were: 174 up to one year, 95 from one to two years, 52 from two to three years, 16 from three to four years, five from four to five years, nine from five to six years, two from six to seven years and two for seven years or more. In addition, 14 convictions were registered under the Criminal Code for periods of from six months to seven years.

Convicted were: 350 persons of British or American origin, one Italian and four Chinese. One narcotic offender was deported to the United States, one to China and one to New Zealand.

### Important Cases

An automobile chase by R.C.M. Police lead to the capture, at Toronto in July, of three individuals, one of whom had a container of 75 capsules of heroin in his mouth. He was sentenced to two years in the penitentiary and, in addition, a heavy fine.

Also in July, a Vancouver hotel operator was caught as he was about to board an airplane at Montreal, with a substantial quantity of heroin. He was convicted and fined, and his arrest led to the breaking up of a ring of drug handlers in Montreal. The leader of the gang was sentenced to five years, for this offence, and to an indeterminate period as an habitual criminal.

A member of the clergy associated with the narcotic traffic in Montreal was sentenced to concurrent terms of two years imprisonment on each of five

charges. The alleged leader of his "syndicate" absconded while on \$12,000 bail, but two other alleged accomplices were awaiting trial at the end of the year on charges of possession and conspiracy.

Residents of Toronto, Hamilton and Vancouver were involved in an important case made by R.C.M.P. narcotic officers after more than a year's work in tracing the movement of heroin between Eastern and Western Canada. This case involved an elaborate cipher system covering the distribution of narcotics. Simultaneous police raids in Toronto and Vancouver resulted in the arrest of ten said to be concerned, and to the discovery of a large cache of heroin. Five of those arrested were given seven year sentences. The others were acquitted.

### **Legitimate Trade**

The licensing system maintained by the Narcotic Control Division continued to function efficiently in maintaining control over the import, export and distribution of legitimate narcotic supplies. Granted only to approved wholesalers, these licences restricted the distribution of narcotic medication to other wholesalers, physicians, druggists, veterinary surgeons, dentists and hospitals. Such transactions were permitted only by individuals in good standing with their provincial associations or colleges, or by responsible officials of wholesale firms, on the strength of signed and dated orders or requisitions.

By a system of monthly sales reports from wholesalers, the division kept a record of narcotic sales made in Canada and was aware, at all times, of such trading by all authorized to engage in it.

No new drugs, synthetic or otherwise, were added to the Schedule to the Opium and Narcotic Drug Act during the year, but the incorporation in it of all derivatives of Demerol and Methadone was contemplated.

The acquisition and distribution of narcotics was handled by 150 licensed wholesale firms, only a few of which, however, were concerned in importing them. A total of 113 import licences were issued during the year.

Revenue to the department from licences, fines and seizures was \$23,417.69, while expenditures for legal fees and court costs amounted to \$44,236.08.

### **Retail Control**

Officers of the R.C.M. Police acted on behalf of the department in the inspection of the records of virtually all Canadian druggists, in connection with the requirement that complete records of purchases and disbursements of narcotics must be maintained at all retail outlets.

This control was supplemented by reports from the druggists themselves, direct to the Division, on all sales of narcotics. The Division was thus in a position to enquire into cases indicating an abnormal use of narcotics and, in many instances, to uncover addicts not previously known, as well as their sources of supply. In most instances, the division required two such reports from druggists covering different three-month periods of the year.

Registrars and officials of associations in the pharmaceutical field co-operated with the division and equally fine assistance was extended by physicians, retail druggists and other professional people concerned with narcotics.

### **Stock Audit**

Narcotic auditors employed by the Department inspected methods of narcotic control in 548 hospitals, audited the stocks and records of 118 wholesalers and held interviews of a special nature with 78 firms or individuals having narcotic problems.

The senior auditor made two trips to Newfoundland to interview provincial officials, narcotic wholesalers, druggists and hospital authorities there in the interest of extension of the division's control to the new province.

A fourth class of instruction was held during the year by the narcotic auditors for R.C.M.P. officers engaged in inspection work at drug stores. The practical value of such courses was demonstrated in the increased efficiency and understanding reflected in reports from these officers.

#### *Analyses and Tests*

Dominion analysts checked shipments of oriental medicines and questionable packages for the R.C.M. Police and customs officers engaged in narcotic enforcement. In some instances such analysis forestalled delivery in Canada of medication containing narcotics.

Saliva tests of representative horses were continued by the R.C.M. Police at important race meetings. While there were no positive reactions, this check was believed to have had an important psychological effect on certain persons.

#### *International Co-operation*

The closest co-operation was maintained with other countries, particularly from the standpoint of fulfilment of obligations under international narcotic conventions, as well as in order to maintain a constant internal supply of narcotics for Canada. This latter was important, since Canada does not produce nor manufacture narcotics and is dependent wholly on imported basic narcotics for domestic uses.

A great deal of statistical and general information was submitted by the division to various international supervisory bodies, inasmuch as Canada has ratified all the conventions relating to narcotics.

Estimates of this country's narcotic requirements were supplied annually to the control authorities and quarterly reports were made to them on imports and exports. In addition, reports were made on some 60 Canadian criminal cases involving narcotics. Such an interchange of information contributed materially to the effectiveness of control which Canada maintained over drugs.

Details of imports and consumption of narcotics and of convictions under the Opium and Narcotic Drug Act are contained in Tables 23, 24 and 25 pages 135, 136 and 137.

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## **NUTRITION**

In its work of evaluating national nutritional problems, assisting in their solution and initiating and encouraging programs designed to improve the nutritional status of Canadians, the Nutrition Division carried on numerous projects during the year.

Surveys were made to evaluate the nutritional status of families in a Nova Scotia fishing community and of school children in an Ontario Health Unit. The Nova Scotia survey, covering 220 persons, was completed late in 1949. Some 900 children were included in the Health Unit study. In both studies the department's Research Division assisted in selection of the samples. All participants kept weekly diet records at two seasons of the year and received medical and dental examinations. Associated biochemical tests were performed by the division's laboratory staff.

A more restricted survey was carried out in a Micmac Reserve school in Nova Scotia, at the request of the Indian Affairs Branch.

A large group of related families with several cases of optic atrophy, and more than 70 potential cases, was the starting point for preliminary investigations, in the Ottawa area, of possible sociological and nutritional factors in the development of blindness. By the end of the year more than 40 of these people had received clinical examination, including extensive haematological and biochemical studies.

The division also supplied a new service to physicians and others lacking equipment required to examine blood specimens for vitamin A, carotene and ascorbic acid. One provincial laboratory submitted 60 specimens for a group of children suspected of vitamin A deficiency.

### **Indian Schools**

By the end of the school year in June 1949 fairly complete information had been obtained on food supplies in each of six representative Indian Residential Schools. A five-year study of nutrition in these institutions was launched in 1948 in cooperation with the department's Dental Health Division and Laboratory of Hygiene and the Indian Affairs Branch.

On the basis of data respecting the 960 children concerned, plans were made for special measures to be taken in each school from September 1949 to June 1950. The plans, which differ, include (i) extra vitamin C in tablet form, (ii) a special flour, (iii) an intensive nutrition education program for staff and children, (iv) another special flour, (v) control and (vi) doubled milk intake.

In connection with the education program, nutritionists visited the school to give guidance and assistance. The co-operation of the staff was gratifying. The school in which milk consumption was to be increased uses dried milk exclusively. Prior to the school term recipes and methods for incorporating extra milk in cereals and puddings, as well as in the menu, were developed in the division. The two schools using the special flours both bake their own bread. The school using the vitamin C supplement receives the tablets free and a controlled experiment is being carried out with them. Medical and dental examinations of the children will be made at the end of the 1950 school year.

### **Experimental Kitchen**

Established to satisfy a definite need, and not duplicating the work of other such kitchens in Canada, an experimental kitchen went into operation in the division in June 1949. Its object is to assist institutions such as hospitals etc., in developing recipes and working methods for their special requirements.

Projects already under way in the kitchen include, (i) improvement of a milk-choc drink for Newfoundland school children, by increasing the skim milk powder and decreasing the sugar, (ii) production of an acceptable bannock mix containing skim milk powder, in order to assure that Eskimos get a certain amount of milk in their diet, (iii) adjustment of recipes used at Indian Residential schools to ensure that children get their daily milk requirement, (iv) use of a taste-panel for testing some of the prepared foods for the *Arctic Ration* pack, and (v) testing large-quantity recipes.

### **Civil Servants**

To assist the Civil Service Health Division, one afternoon per week was set aside for appointments with government personnel referred by Nursing Counsellors for nutritional advice. Under this plan, 40 civil servants were given clinical and biochemical examinations, including blood tests and urinalyses for thiamine, riboflavin, niacin, glucose and albumen.

## Educational Materials

In co-operation with the Information Services Division, educational materials were produced for and in consultation with provincial nutritionists and others.

A new publication, *Meals for One or Two*, was printed and several other new items were mimeographed and issued. To meet continuing demand, the division revised and reissued *Healthful Eating* (English), *Good Red Blood* (English and French), *How Well Fed Are You?* (English and French), *If You Serve Food* (English), *The Lunch Box is on the March* (English and French), *Mother, the School Lunch* (English and French), *Canada's Food Rules* (English and French) and *Camp Feeding* (English and French), as well as the filmstrip *Rural School Lunches*.

Four manuals on quantity food service operation were completed and one, *100-Serving Recipes for Men doing Heavy Work*, is now being distributed. The others, for distribution in 1950, are *Cook and Cookhouse*, *Food Purchasing and Storage* and *Quantity Food Preparation and Care of Equipment*. The *Table of Food Values Recommended for Use in Canada* was revised and is to be reprinted.

Articles on school lunches were sent regularly to provincial nutritionists for use of teachers, nurses, etc., and items were provided for the department's press and radio educational services.

Monthly, the division issued *Canadian Nutrition Notes* to 8,000 readers in the nutrition field, *Bulletin to Caterers*, for food service operators and *Just between Cooks*, for cooks in Indian Residential schools. The first issue of Volume Two of *The Bulletin on Nutrition*, organ of the Canadian Council on Nutrition, contained the new Canadian Dietary Standard.

## Miscellaneous

The division received numerous requests for information, many requiring technical research. Assistance was asked in connection with the layout and equipment of kitchens and with group feeding in schools, hospitals and other institutions.

New methods and techniques tried in the laboratory involved, among other subjects, serum iron, B vitamins in urine, pH measurements in the oral cavity and photometric red cell counts.

The division was represented on the Foods Committee of the Canadian Government Specifications Board for Arctic Army Rations.

Provincial programs and nutrition education were discussed at the seventh meeting, in March, of the Dominion-Provincial Nutrition Committee of the Canadian Council on Nutrition, which continued to function as an advisory body to the Minister.

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## PUBLIC HEALTH ENGINEERING

Activities of the Public Health Engineering Division continued to increase and requests for professional services and advice were numerous during the year. There were no additions to staff and the death in January of Mr. G. H. Edgcombe, who had rendered valuable service to the division, was a distinct loss.

## Sanitation

More than 500 sanitary surveys were made in regard to water and ice sources and sanitation generally. Collected from common carriers engaged in international and interprovincial traffic, some 5,000 water samples were

submitted for bacteriological analysis. The examination of railway stations, restaurants and bunkhouses, inaugurated this year, added to the work of the division. Reports were made on 103 bunkhouses and 60 restaurants. Co-operation received in effecting improvement in this field was most encouraging.

### **International Joint Commission**

Investigation of pollution of boundary waters, particularly of the Niagara River, continued to form a prominent part of summer activities in the Ontario region. Field work was completed early in July and there remained only the assembling of data and preparation of the final reports.

More than 4,800 chemical and bacteriological determinations were made during the year.

A report covering the pollution reference of the boundary waters from Lake Superior to Lake Erie was submitted to the International Joint Commission in October.

The report for the amended reference concerning the Niagara River from Lake Erie to Lake Ontario was completed and is to be submitted to the Commission during 1950.

### **Oil Pollution**

The seriousness of oil pollution in Lake Ontario led to a conference with the major oil companies operating fleets of tankers on the Great Lakes, and with officials of the Ontario Government, in an effort to arrive at some solution of this problem.

### **Co-operative Projects**

With the continued development of the Northwest Territories, there was a corresponding increase in the demand for services of the division in the many and varied problems related to water supply, sewage disposal and sanitation generally. Requests for design of sewage and water supply systems were numerous and every effort was made to co-operate as fully as possible with other federal departments on problems of mutual concern.

During the year the Province of Newfoundland received special consideration and, on request, a comprehensive survey was made of sanitary conditions in and around the community of Bell Island.

### **Shellfish Control**

Field activities related to control of shellfish areas increased, due, in part, to an agreement between the United States Public Health Service and this department establishing control measures in the handling and export of shellfish. The recognition of duly certified exporters by the respective government agencies stimulated interest of the shellfish industry.

During the year, apart from routine examinations of shellfish shucking plants, 76 sanitary surveys were made of the growing areas.

### **Advisory Committee**

The Advisory Committee on Public Health Engineering held its inaugural meeting at Ottawa in January. The meeting was attended by representatives of engineering divisions of provincial health departments all over Canada.

Detailed discussion covered all phases of environmental sanitation and much valuable information was presented at a round-table conference. Continued progress, resulting in closer co-operation with provincial organizations, is anticipated.

*Information.*—Publications of this division continued in good demand and three posters on subjects of sanitation, produced during the year, were heartily endorsed by public health officials.

## **QUARANTINE, IMMIGRATION MEDICAL AND SICK MARINERS SERVICES**

Continuation of the post-war movement to this continent from older lands made increasing demands during the past year upon the services maintained by this department to insure the selection of healthy immigrants and minimize the danger of importation of infectious disease, as well as to provide medical care at Canadian ports for passengers of incoming vessels and aircraft as well as for seamen.

The rising popularity of flying as a means of long-distance transportation necessitated increased attention to air ports of entry, especially Gander, in Newfoundland.

### **QUARANTINE SERVICE**

The Quarantine Service, oldest health activity of the Dominion Government, functioned for the purpose of preventing the entry of infectious disease into Canada from without, through traffic arriving by water, air or the inland boundary, under authority of "An Act Respecting Quarantine" and the Quarantine Regulations.

Vessels were inspected on arrival during the day and at night on request. Radio pratique was in effect, except for arrivals from the Orient. Aircraft were inspected on arrival, day and night at the major airports.

No cases of smallpox, typhus, yellow fever, bubonic plague or cholera were found on board vessels or aircraft on arrival at Canadian ports, although these diseases were present in the countries from which many had departed. All persons coming from smallpox areas were required to show evidence of immunity from the disease or submit to vaccination on arrival. Sixty-two cases of minor infectious disease, with 25 contacts, were reported.

During the year, a total of 2,794 vessels, having on board 282,920 persons, were inspected by the medical officers of this Service. Of this number, 159,286 were members of crews, 123,385 were passengers and 249 were distressed seamen and others.

A total of 932 vessels were inspected for vermin and rodents. Of these, 635 had come from plague-infected ports. Fumigation was carried out on 108 vessels; 355 were granted exemption certificates and 356 had their certificates endorsed. A total of 344 rats and 209 mice were recovered.

In addition to the fumigation of merchant vessels, officers of this Service, on request of the respective departments, fumigated various ships and shore establishments of the Royal Canadian Navy, the Marine section of the R.C.M. Police, the Marine Branch of the Department of Transport, Pilotage Service, and the Immigration Branch of the Department of Citizenship and Immigration.

During the year, 133 vessels applied for duplicate pratique and 1,935 radio pratique.

Local Customs Officers, in their capacity as Quarantine Officers at unorganized ports, reported entry of 283 vessels.

Additional duties were carried out, as usual, by the Service's medical officers, such as medical examination of pilots, light-house keepers, radio operators serving in remote areas, and other civil servants; immigration medical examinations and the treatment of sick mariners.

Draft Quarantine Regulations for Air Travel, in relation to the International Sanitary Convention for Aerial Navigation, 1944, which were prepared previously, received further consideration. A definite quarantine service has been set up at Gander Airport in Newfoundland. Dorval Airport, near Montreal, is a fully organized sanitary airdrome. Satisfactory arrangements

have also been made for medical inspection, when necessary, of aircraft arriving at Sydney, N.S., Moncton, N.B., Malton Airport, near Toronto, Ontario, Sea Island, near Vancouver, B.C., and at Harmon Field, Stephenville, Newfoundland.

Aircraft, including their passengers and crew members, were subjected to Quarantine inspection on arrival from Overseas, as follows:

Gander, Newfoundland .....	698
Harmon Field, Newfoundland .....	92
Sydney, N.S. ....	81
Moncton, N.B. ....	2
Dorval, P.Q. ....	509
Malton, Ont. ....	181
Edmonton, Alta. ....	33
Sea Island, B.C. ....	133

International Certificates of inoculation and vaccination have been published in booklet form for distribution to persons travelling abroad. These have been in great demand, especially during the latter half of the year under review. Official approval has been given to agencies at which yellow fever and other inoculations may be given and certified by the Service on the International approved forms. There are now 13 centres extending across Canada where such services may be obtained. A total of 993 inoculations against yellow fever were carried out during the year.

### IMMIGRATION MEDICAL SERVICE

The Immigration Medical Service supplied medical advice to the Immigration Branch, Department of Citizenship and Immigration, with regard to physical and mental condition of applicants for immigration. In the majority of instances, prospective immigrants were examined by the Overseas Medical Service of the Department before embarking for Canada. They were subject to further medical inspection on arrival at the Canadian port of entry. If the immigrant had not been examined previously by the Canadian medical service overseas, a complete medical examination was carried out at the Canadian port of arrival. As a result of the advice of the department's medical officers, the Immigration Branch was then able to determine whether or not the individual concerned should be prohibited from entering Canada for medical reasons.

Immigration hospitals were maintained at the principal ports of entry, in order to provide observation, for diagnostic purposes, and treatment for immigrants on their arrival, if such was found necessary. These hospitals were well equipped and a high standard of medical practice was maintained.

With overseas headquarters in London, England, at 42-46 Weymouth Street, the Immigration Medical Service had full-time Canadian medical officers stationed in the United Kingdom at London, Glasgow and Liverpool; on the Continent, in Paris, Brussels, The Hague, Rome and also in Germany and Austria. In the Occupied Territories, doctors of the Service accompanied Immigration examining teams dealing with Displaced Persons.

In addition, there were 598 roster doctors in the United Kingdom, at Dublin, Eire, Oslo, Norway, Stockholm, Sweden, Copenhagen, Denmark, Warsaw, Poland, Prague, Czechoslovakia, Athens, Greece, Lisbon, Portugal, Belgrade, Yugoslavia, Berne, Switzerland, Malta, and in New Delhi, India, Karachi, Pakistan, Hong Kong, and Shanghai, China.

All immigrants were required to have an X-ray examination of the chest before entry to Canada was approved, except those coming from the United States, New Zealand and Australia. A total of 2,453 X-ray films were referred



Newcomers from overseas were checked by immigration medical authorities to ensure that disease was not brought into Canada.

to Ottawa, and 132 of the individuals concerned were certified. A large number of cases have been certified because of pulmonary tuberculosis. This was a result, in large measure, of routine X-rays of the chests.

In Canada 78,762 immigrants were medically inspected on arrival at ocean ports. A total of 80,105 prospective immigrants were medically examined overseas. Medical re-examinations of 17,331 individuals were made before a final decision was rendered as to their condition. In addition, 18,645 non-immigrants were given careful medical supervision on arrival. A total of 1,964 individuals were refused permanent admission to Canada as a result of these examinations in the British Isles, in Canada, and on the Continent.

Patients of the Department of Veterans Affairs, of the Indian Health Service and of the Sick Mariners' Service were treated at Immigration Hospitals at Quebec and Halifax.

The medical officers of this Service in Canada also assisted in Quarantine and Sick Mariners work and performed examinations for the Civil Service Health Division, the Department of Transport and other Government Departments. Persons proceeding to radio stations and light-houses in remote areas received preventive inoculations.

A summary of activities of the Immigration Medical Service, details of examinations and details of certifications and disposition of cases, both at Canadian ports and Overseas will be found in tables 33, 34 and 35, pages 142 and 143.

### SICK MARINERS' SERVICE

Out of a total crew membership of 92,652 on vessels at Canadian ports, the Sick Mariners' Service provided treatment this year for 24,823, which was a considerable increase over the previous year.

Part V of "An Act Respecting Shipping", which has existed, with various amendments, since 1867, provides medical and surgical treatment of all members of the crews of those vessels paying dues under its authority. Dues are levied and collected by the Collector of National Revenue on every ship arriving in any port of the provinces of Nova Scotia, Prince Edward Island, New Brunswick, Newfoundland, Quebec and British Columbia, and at ports in Manitoba and Ontario, on Hudson Bay and James Bay, provided the ship does not come within one of several exemptions.

A high standard of general medical practice is provided at all ports in the provinces named, where there are customs officers legally competent to administer the Act. Treatment is free for a period of one year, if needed. No expense is spared in providing the best specialist medical, surgical and hospital care, when required. Wherever possible, a choice of hospital is permitted.

Conditions under which treatment is obtained are kept as simple as possible. The sick seaman applies to the captain of the vessel, who sends him to the local Collector of Customs with a written statement setting forth his employment period on the vessel and giving details regarding payment of sick mariners' dues. Concise forms are provided for this purpose. The Collector verifies these facts and, if satisfied, refers the patient to the doctor or hospital previously nominated for this purpose. Emergency cases are taken direct by ambulance from ship to hospital.

During the year a number of Indian patients were hospitalized in the Marine Hospital at Sydney, N.S. These Indian patients were referred to the hospital by an Indian Agent and the Indian Health Service.

Details of sick mariners' treatment and of vessels, dues and expenditures will be found in Tables 36 and 37, pages 143 and 144.

## LEPROSY

Both of Canada's leprosaria have been making full use of the newer drugs available for treatment of this disease, and favourable results have been obtained in certain early cases.

*Bentinck Island, B.C.*—Two patients were in hospital, one remaining from last year, the other admitted during the year. Both were Chinese males and were under routine care and treatment.

Maintenance of equipment has been carried on at this Station in anticipation of the time when immigration from the Orient returns to normal, with the resumption of former shipping services. Relative information follows:

Remaining from last year .....	1
Admitted during the year .....	1
Died during the year .....	0
Released during the year .....	0
Remaining in hospital .....	2

*Tracadie, N.B.*—The leprosarium at Tracadie is a new and modern wing of the Hotel Dieu de St. Joseph Hospital. The Division pays the hospital for the care of leper patients on a per diem basis. The quarters are very suitable for the purpose for which they were designed. A total of 12 beds are available.

One of the seven patients in hospital died during the year and there was one admission, leaving a total of seven. Four of these were considered as under active treatment and showing signs, to a variable degree, of active leprosy. The other three were considered as arrested cases. Four of the patients were males and three were females. Three were of French-Canadian origin, two of Russian ancestry (one Canadian born), and two Chinese (one Canadian born). Particulars are as follows:

Remaining from last year .....	7
Admitted during the year .....	1
Died during the year .....	1
Discharged during the year .....	0
Remaining in hospital .....	7

## TUBERCULOSIS AND VENEREAL DISEASE CONTROL

In its role of providing leadership in fighting both tuberculosis and venereal disease in Canada, the Tuberculosis and Venereal Disease Control Division continued to stress all effective measures directed toward those ends.

Major activities of the division included the administration of certain aspects of the National Health Program's Venereal Disease Control Grant as well as of its Tuberculosis Control Grant, these being conducted in consultation with the Directorate of Health Insurance Studies.

### V.D. Control

In addition to participation in the National Health Grants Program, venereal disease control activities included:

- (a) development and distribution of V.D. educational material and other informational activities;
- (b) continuing review of ex-Service personnel syphilis documents and maintenance of permanent summaries of such case histories;
- (c) preparation and distribution of the Quarterly Statistical Report on Venereal Disease in Canada;

- (d) provision of assistance and participation in the Fourth Western Canada V.D. Conference, and
- (e) increasingly close liaison with Provincial V.D. Control bodies and on an international basis.

#### *Federal Grants*

During the fiscal year 1949-50, the pre-existing separate V.D. Control Grants were united to form a total of \$517,544 for all provinces. Distribution was made on the basis of a flat grant of \$4,000 to each province, the remainder according to population.

Funds were provided on a matching basis and in the year's operation expenditures were made up to 95.2 per cent of the total allotment. Major activities in all provincial programs included such items as extension of treatment services through the provision of free penicillin, payment of fees to physicians for diagnostic and treatment services, support of free clinics and provision of personnel and special equipment for certain of these clinics and provincial administrative establishments. Also covered were extension and improvement of laboratory services, extension of epidemiological and educational activities as well as provision of technical and scientific equipment, and similar procedures.

#### *Education*

During the course of the year considerable effort was extended toward the development of a manual dealing with the diagnosis and treatment of syphilis and gonorrhoea for use by the practising physician. This is expected to be published in 1950.

Additional supplies of the lay information booklet, "V.D.—What You Should Know", were prepared and distributed as well as a variety of informational material previously developed or obtained from other sources and made available to the provinces.

#### *Service Personnel Records*

In the continuing review of ex-Armed Forces personnel documents, records for Army and Air Force were concluded and those for Naval personnel well advanced. Informal reports from provincial sources have indicated that this review and the maintenance of case history summaries at the central office is most helpful in the follow-up of these patients.

#### *Quarterly Statistical Report*

The statistical report initiated four years ago from reported incidence figures on venereal disease provided by Provincial Health Departments to the Dominion Bureau of Statistics was continued. This report is distributed to the Provincial Health Departments at quarterly intervals as well as to other interested agencies and it represents the most complete compilation of such figures available.

During 1949 for Canada as a whole 25,598 cases of venereal disease were reported, consisting of 8,131 syphilis and 17,439 gonorrhoea cases. As compared with the previous year 1,893 fewer cases of all types of venereal disease were reported, an improvement of 7 per cent. Total syphilis was reduced by 776 cases or 9 per cent and gonorrhoea decreased by 1,108 cases or 6 per cent.

#### *Other Activities*

The Chief of the Division and the Medical Consultant participated in the Western Regional V.D. Conference held in Vancouver. At this meeting matters relating to the utilization of the Federal Grant, surveys of provincial programs, epidemiologic procedures, educational activities and matters relating to the diagnosis and treatment of venereal disease were considered.

Visits were made to all provinces at various times during the year and meetings of the American V.D. Society and the National Institute of Health Symposium on V.D. held in Washington, as well as the American Regional Conference of the International Union against Venereal Disease were attended. Continuing close liaison is maintained with the V.D. Control Division of World Health Organization and other international agencies.

### **Tuberculosis Control**

Under the Tuberculosis Control Grant, the sum of \$3,389,847 was provided for 1949-50. The method of distribution and utilization was unchanged from the first year of operation of the grant.

In all, 196 projects were approved representing the allocation of \$2,769,766 or 81.7 per cent of the total. Of this an amount of \$2,426,962.38 or 71.6 per cent of the total was expended.

#### *Activities*

Some of the more outstanding projects carried on under the grant were as follows:

- (a) Extension of detection services centering chiefly around the routine hospital admission chest X-ray examination and mass survey activities, including the use of mobile units and performance of specific surveys. The hospital admission procedure was intensified in practically all provinces and for all purposes an amount totalling better than \$950,000 was made available.
  - (b) In the field of institutional care and treatment of tuberculosis emphasis was placed upon the purchase and free provision of the drugs, streptomycin and para-amino salicylic acid. In all provinces projects were submitted and the total approved expenditure was \$425,000.
  - (c) The purchase of technical and scientific equipment, other than X-ray equipment and educational materials, represented a commitment of approximately \$200,000.
  - (d) Specific projects aimed at the improvement and extension of laboratory services in tuberculosis were undertaken in six provinces.
  - (e) Rehabilitation in the field of tuberculosis showed progressively increasing growth as indicated by the approval of projects dealing with this activity in eight provinces.
  - (f) Projects were approved in eight provinces providing for the extension of educational activities on various aspects of tuberculosis.
  - (g) In three provinces eleven clinical research studies are being conducted on diagnostic and treatment problems in tuberculosis.
-

# HEALTH INSURANCE STUDIES

Administration of the National Health Program of grants, and fundamental studies on health insurance and related matters, were responsibilities of the Health Insurance Studies directorate.

When the National Health Program was inaugurated in May, 1948, it represented the first tangible step taken in Canada towards the preparation of a nation-wide health insurance plan. This program, which provides annual grants to the provinces in excess of \$30,000,000 for the immediate extension and improvement of their health services, made considerable progress during the year towards the laying of a foundation upon which a national health insurance scheme might be built.

With the assistance of the grants, the provinces steadily strengthened and extended their health facilities and hospital accommodation, so that, across Canada, there was emerging a network of basic health agencies adequately manned by trained personnel. The National Health Grant Program stood out as Canada's assurance that any scheme of hospital and health insurance inaugurated in this country would rest on the firmest of premises.

## *Administration*

Fundamental administrative functions and over-all control of the National Health Program were performed by the director, while detailed examination of projects submitted by the provinces was carried on with the assistance of appropriate federal health divisions. In addition, the director was responsible for inauguration and general guidance of studies on basic approaches to health insurance.

Appointment of two assistant directors in 1949 and expansion of the administrative staff greatly facilitated the work of the directorate.

Provincial reports submitted on the utilization of the grants built up a picture of the health situation across Canada. Analysis of this material has been one of the major objectives of the directorate.

## *Plans Studied*

Investigation was carried on continually into the medical, financial and administrative aspects of health insurance plans operating in England, Australia, New Zealand and Continental countries. Developments in the field of social medicine in the United States were closely observed and analyzed. Plans were formulated for a nation-wide statistical study to determine the incidence of sickness and disease in Canada. When completed, this survey will make available accurate up-to-date information of the utmost importance in planning for a Canadian scheme of health insurance.

By such methods, Canada was keeping abreast of advances made throughout the world in the field of social medicine, so that, when the time arrived, any scheme adopted in this country would embody the latest improvements and developments and, in so far as possible, avoid the now apparent errors of countries which pioneered in this field.

In addition to such studies, plans for the inauguration of medical care and hospitalization pre-payment schemes were under constant consideration.

## **Health Survey Grant**

In view of the necessity of taking inventory of Canada's existing health facilities and making recommendations for their extension and improvement, the Health Survey Grant was considered basic to all others in that it allowed

the provinces to assess the magnitude and urgency of the need for greater health and hospital facilities within their own borders. The information thus obtained was used to ensure that funds received under other grants were utilized effectively, taking into account local needs and the state of existing facilities.

Interim reports on the findings and recommendations of the provincial survey committees were received by the directorate, were analyzed and integrated, so that a picture of the basic health facilities of Canada was obtained. This comprehensive evaluation of Canada's present establishment was of fundamental importance, inasmuch as it formed the only logical basis for planning for future development.

The Health Survey Grant is a non-recurring allotment, originally set at \$625,000, to assist the provinces in studying their health and hospital needs. During 1949-50, some \$490,000 was available, representing the residual portion of the original \$625,000, plus an added amount of \$20,000 for Newfoundland.

### **Hospital Construction Grant**

Provincial action under the hospital construction grant has been especially vigorous. Whereas it was originally hoped that these grants would result in the addition of some 40,000 new hospital beds when the five-year program was complete, construction has proceeded so rapidly that, by the end of the fiscal year, half the ultimate goal had been accounted for by projects submitted up to that time. Accordingly, it is now anticipated that, when the five-year program reaches completion, Canada's bed complement will have been augmented to an extent appreciably in excess of that originally envisaged.

During 1949-50, the sum of \$13,334,629 was available to the provinces for hospital construction, the money being allotted to specific building projects on the basis of \$1,000 for each active treatment bed and \$1,500 for each chronic or convalescent bed.

### **General Public Health Grant**

Having as their objective the strengthening of public health services generally in those areas where the provincial authorities felt such was necessary, funds under the General Public Health Grant were utilized for a variety of services including: development of new health units and extension of services in existing units; extension of laboratory services and immunization programs; dental care, including the establishment of dental health divisions and dental hygiene clinics; environmental sanitation and public health engineering services; health education—employment of health educators, provision of visual aid equipment, publications, etc.; child health—school medical services, well-baby clinics, prematurity services, etc.

Under the General Public Health Grant, \$5,276,000 was available to the provinces in 1949-50, which was an allotment of 40 cents for every man, woman and child in Canada.

### **Mental Health Grant**

Under the Mental Health Grant provision was made to extend facilities for the treatment of mental disorders. This included preventive action in the community itself. Programs of mental hygiene and instruction are now doing much to prevent mental illness and the work of the guidance clinics in this respect was most important.

With the assistance of this grant, 30 mental health and guidance clinics have been established and are being maintained across Canada. Additional staff and equipment have been supplied to mental hospitals in all provinces.

More than 700 mental health personnel were employed during 1949-50, including psychiatrists, psychologists, mental health nurses, psychiatric social

workers, mental health instructors and a variety of other workers whose services were considered necessary for adequate care of the mentally ill. In addition, more than 300 mental health personnel received professional training in their various specialties, under this grant.

All will return to service throughout the provinces in the field of mental health, where the benefits of their additional training will accrue to patients placed under their care.

Under this grant, \$4,122,171 was available to the provinces, divided on the basis of \$25,000 flat grant to each province, with the balance according to population.

### **Crippled Children's Grant**

This grant concerned care of crippled children, a crippled child being defined as a person under 21 years of age who, because of accident or defect, was restricted in normal muscular movement. Services provided ranged from the establishment of clinics and training centres to professional training of nurses and therapists in the care of handicapped children.

A number of the provinces made provision for hospital care, training and rehabilitation of crippled children, and in some cases utilized the administrative facilities of such organizations as the Junior Red Cross and the Western Society for Physical Rehabilitation. Children suffering from poliomyelitis and cerebral palsy were eligible for benefits under terms of the Order in Council covering this grant, and major portions of grant money were devoted to alleviation of disease caused by these diseases.

Under the Crippled Children's Grant, \$515,944 was divided among the provinces on the basis of \$4,000 to each, the balance according to population.

### **Professional Training Grant**

Provinces were enabled to recruit and train more public health and hospital personnel by virtue of funds provided in the Professional Training Grant. This was accomplished by the provision of bursaries to provide academic instruction to selected individuals, and by the establishment of special training programs at universities and other centres.

Because of the serious shortage of trained personnel in every health field, the needs of the provinces could not be met wholly through the operation of the professional training grant alone. Accordingly, approval was given for professional training in various fields under grants appropriate to the type of instruction. For instance, a large number of psychiatrists were given training under the Mental Health Grant, as it was felt that their added knowledge would represent a direct and tangible benefit in the field of mental health when they returned to service in the provinces.

In all, some 1,400 health personnel received training during 1949-50. This figure included 155 physicians, 79 psychiatrists, 42 psychologists, 62 mental health nurses, 50 psychiatric social workers, six dentists, 32 sanitary engineers, 75 sanitary inspectors, 120 technicians, 399 nurses of various specialties, and numbers of nutritionists, therapists, hospital administrators, bacteriologists, nursing aides, veterinarians and others.

During 1949-50, sums totalling \$515,944 were available to the provinces on the basis of a flat amount of \$4,000 per province and the remainder according to population.

### **Public Health Research Grant**

This grant had as its objective the stimulation and development of public health research. To make the grant as effective as possible and, further, to permit of fundamental research projects which might exhaust the total grant

or a substantial portion of it, these moneys were not allotted to the provinces but, with the approval of the Dominion Council of Health, were apportioned for special research projects which were submitted by the provinces on behalf of some institution or body.

On this basis, 48 investigations and studies were afforded financial aid to assist them in carrying their work to a successful conclusion. Projects were received from every province except Newfoundland and, though highly diversified as to nature and objective, all strove towards a common end, namely, new knowledge or discoveries which are expected to be of value to Canada in the health field.

### **Cancer Control Grant**

The purpose of the Cancer Control Grant was to assist the provinces in improving their efforts in the cancer control field, in order that there might ultimately be established, in every province, an adequate program to ensure that no person suffering from cancer would lack the necessary assistance.

In three provinces, with full-scale cancer control programs, federal funds were applied directly to those programs, to expand and render more efficient the control and treatment measures initiated. The other provinces utilized their allotments for specific projects, such as the establishment of cancer diagnostic clinics, extension of free treatment, purchase of radium and radiotherapy equipment for hospitals and, in some cases, for professional training of personnel in cancer cure methods.

The sum of \$3,590,000 was available to the provinces under this Grant, in 1949-50.

### **Venereal Disease Control Grant**

This grant was utilized by the provinces to strengthen and expand their own venereal disease control programs. These programs provided for establishment of venereal disease clinics for diagnosis and treatment, lay and professional education, case find and case holding, free laboratory services, free consultative, diagnostic and treatment services, provision of drugs and compiling of statistics dealing with venereal disease.

Under the Venereal Disease Control Grant, \$515,944 was available to the provinces, on the basis of a flat amount of \$4,000 per province, the remainder according to population.

### **Tuberculosis Control Grant**

Extension of free treatment, including sanatorium and post-sanatorium care, was made possible by this Grant.

Free treatment, by the use of streptomycin, was greatly expanded and efforts were made to completely rehabilitate patients released from sanatoria by training and reorientation procedures to assist discharged patients in leading useful lives in the community.

An outstanding factor of the preventive programs was the inauguration and wide-spread application of mass x-ray survey measures, by supplying x-ray equipment to hospitals and clinics for routine examination of all admissions and by establishing travelling units to carry out surveys among the generally-well population.

Available to the provinces this year under this grant was \$3,176,614 on the basis of a flat \$25,000 to each province, the balance divided 50 per cent on the basis of population and 50 per cent on the average number of deaths from tuberculosis in the province over the preceding five-year period.

## FOOD AND DRUGS

Observance of the 75th anniversary of the passage of the first Adulteration Act, this year directed public attention, as never before, to federal services ensuring the safety of consumables. "Open Houses" were held at all regional Food and Drug offices across Canada and thousands of interested persons took advantage of the opportunity of seeing scientists at work and of learning at first hand how the department maintained standards for imported food, drugs and pharmaceuticals.

In co-operation with the Information Services Division, a country-wide information project was co-ordinated with events marking the anniversary. Considerable publicity was given to the occasion by the press, the radio and publications, and premiere showings were arranged of films dealing with work of the Divisions.

Two illustrated publications dealing with food and drug work, *Pure Food-Safe Drugs* and *Canada Pioneers in Food and Drug Control*, were widely distributed and a 75th anniversary number of the Divisions' house organ *The Food and Drug News*, contained photographs of members of the staff from coast to coast.

On March 16, approximately 100 representatives of the divisions, other branches of government, the United States Public Health Service, the food and pharmaceutical industries and others, were guests of the divisions at an anniversary dinner at Ottawa. The Minister of National Health and Welfare told the gathering that it implied "recognition of meritorious service" on the part of all concerned in keeping Canada's food and drugs safe.

Other speakers included Dr. Leonard A. Scheele, Surgeon-General of the United States, who brought congratulations from his government.

Both the Minister and the Director mentioned the great loss to the public service in the death, a short time previously, of A. Linton Davidson, an assistant to the Director, who had been closely associated with arrangements for the anniversary observances. Bound copies of a special book *The Genesis and Growth of the Food and Drug Administration in Canada*, prepared by Mr. Davidson, were presented to guests at the dinner.

The Director's reminder, in the anniversary edition of *The Food and Drug News*, that detection of adulteration was no longer merely a matter of "looking for wooden nutmegs" was borne out by the year's activities of the divisions.

### Enforcement

The Laboratory and Inspection Services checked a total of 89,026 items of foods and drugs of which 29,213 were examined in the laboratories and 59,813 were released through customs after examination by inspectors without being referred to the laboratory.

In most cases the Divisions succeeded in their primary aim to secure compliance with requirements of the Act and Regulations by giving advice to those seeking it or warnings to those who inadvertently violated the law. No definite figure can be given of the number of cases handled in this manner but it runs into the thousands. Unfortunately, this type of action was not always sufficient and court action or seizure sometimes was necessary.

The imposition of a total of \$1,899.60 fines and costs resulted from 25 court cases concluded successfully. In addition, 23 cases were settled out of court by tender and acceptance of a total of \$855.

A total value of some \$35,000 was involved in 39 seizures. Among these was a shipment of 27 tons of fish which had been contaminated by copper in an

improperly cleaned railroad car. A lot of various drugs that had been contaminated with sewer water and two lots of penicillin lozenges that were considerably below the labelled potency were destroyed.

The work on cream-style corn initiated last year was continued and extended to include factory inspection during the corn canning season. The quality of the finished product showed improvement over that found the previous year, which may have been due, in part, to better climatic and crop conditions. The factories were advised regarding means of improving sanitary conditions.

The regulations dealing with food colours were carefully considered in consultation with the trade and a new set was prepared with a view to permitting more effective control of this commodity. Some food colours which did not comply with existing standards were seized and destroyed.

Considerable attention was given to the examination of soft drinks. In spite of the fact that there was no longer any scarcity of sugar, some bottlers still used saccharin and it was found necessary to prosecute them.

Sausage was another commodity which required continual attention. It was frequently adulterated by the addition of preservative (usually sulphur dioxide) or colouring matter, or by the use of an excess of cereal or of water. Many of the manufacturers were warned that they must comply with the regulations and a number of them were prosecuted.

The United States refused entry to a shipment of Canadian maple syrup which had been found to be adulterated with white sugar. Conferences were held with the Quebec and Federal Departments of Agriculture with a view to devising means for controlling adulteration of maple products, which appeared to be widespread.

The regulations requiring that certain drugs be sold on prescription only appeared to be disregarded by certain druggists. Two of them were convicted and fined and a number of other prosecutions are being prepared.

Although urethane, used for a considerable time for its anesthetic action and also in the treatment of leukemia, was restricted to administration under immediate medical supervision, one manufacturer began marketing a syrup of urethane for use as a cough remedy. In view of the potential hazards of self-medication with this drug, it was added to Appendix IV to the Food and Drug Regulations in order that it would be used only on medical prescription.

All the laboratories continued to carry on considerable analytical work for other departments, more particularly the Department of Agriculture and the Royal Canadian Mounted Police.

On the other hand, the Food and Drugs Directorate was dependent to a considerable extent on the co-operation of other departments for the effective enforcement of the Food and Drugs Act and this co-operation has been given wholeheartedly. Outstanding in this respect has been the help accorded by customs officials throughout Canada. As a result of conferences between customs and food and drug officials in Ottawa a plan was put in force which assures the closest possible liaison and co-operation between the field officers of the two services throughout the whole country.

### **Advisory Boards and Committees**

Meetings were held during the year of the Advisory Board on Proprietary or Patent Medicines and of the Canadian Committee on Pharmacopoeial Standards. Consultations were held with various members of the Advisory Panels on Foods and Drugs who have advised the Divisions on contentious problems of a technical nature.

Co-operation with the United States Pharmacopoeia Revision Committee and the British Pharmacopoeia Commission has consisted of supplying technical information and advice and carrying out laboratory work as described in the reports which follow of the Laboratory Services.

The Committee on Biological Standardization of the World Health Organization was supplied, on request, with information on standards and methods of assay.

The Technical Committee of the Canadian Pharmaceutical Manufacturers Association and other manufacturers' groups were consulted on technical questions in preparation for amendments to the Regulations under the Food and Drugs Act.

Consultations have also been held with the Association of Canadian Distillers and the technical committee of the Provincial Liquor Commissions on matters pertaining to alcoholic beverages.

The Canadian and International Standards used in biological testing have been distributed on request to manufacturers and research institutions in Canada.

### INSPECTION SERVICES

*Labels, Advertisements.* Inspection Services reviewed 9,867 English and 2,886 French radio commercials, 619 folders, 220 newspaper advertisements, 2,985 labels and 887 cartons.

Again, the high level of co-operation afforded by the manufacturers and advertisers concerned was most gratifying. As in the past, many labels were submitted voluntarily for an opinion in spite of the well-understood fact that the Act does not provide for any formal approval. In a number of instances, where changed requirements of the regulations demanded label revisions, arrangements were made to permit the using up of stocks in hand in order that there should be no waste or loss. Since the correction of most infringements was satisfactorily negotiated, there were few prosecutions.

One of the Divisions' more important actions concerned an advertised treatment for obesity. The treatment purported to be a dietary plan, with which the Food and Drugs Act did not seem to be concerned as no food or drug was sold or offered for sale. With the dietary plan, and bearing the same name as the plan, tablets were sold as a dietary supplement providing a few vitamins and minerals. The Divisions submitted that the public could hardly escape the impression that the tablets took part in the claimed reducing effort, an erroneous impression in view of their composition, and the Court concurred in the charge that section 32A of the Act was thus violated.

Because, in addition, advertisements overtly included the tablets as working wonders for fat people, a conviction was also secured under section 6A of the Act. In giving judgment the magistrate said, in part, "It is quite obvious that the accused intended that persons following the diet would, in losing weight, attribute their improvement to these tablets. It is hard to conceive of any respect in which the advertisement could have been more fraudulent than it was". It should be mentioned that the recommended reducing diet was a good one; so good that it was difficult to see the necessity for supplementing it with vitamins or minerals.

Obesity was included in the schedule of afflictions for which a treatment should not be offered to the general public because of the inherent dangers of unsupervised self-treatment.

Another important judgment was secured against a man who, in spite of stern warning and a thorough explanation of the law, persisted, by rather devious means, in soliciting customers for a worthless drug for tuberculosis. The departmental inspectors, aided by the Post Office and National Revenue

Departments, successfully untangled operations that the man had probably hoped could not be traced. In finding this man guilty the magistrate said. "In my opinion any man who will try and play upon the mental attitude of some person suffering from tuberculosis is making one of the meanest tricks I can imagine . . . I cannot imagine anything more contemptible".

*Inspectoral.* Following the advent of graduate inspectors it was possible and profitable this year somewhat to increase the scope of inspection operations, relieving in part the more central offices of direct responsibility for certain phases of the work, thus decentralizing it to an increasing extent and permitting the laboratory staffs to assume more analytical work.

At one time all vacancies in the inspectoral staff were filled, but at April 1, 1949, the chief inspector in the Western Region retired from the service. This vacancy was filled, by promotional competition, after the usual six months of retiring leave was ended, but the vacancy thus caused has not yet been filled.

Inspectors continued to make visits to radio broadcasting stations. These visits have been productive in promoting cordial relations with station managers and in securing good coverage of the field.

Shortage of staff, over the years, has prevented any inspection, other than that which could be described as opportunist, of factories where foods or drugs were being made and packed. While the sanitary condition of a factory is not a matter at present dealt with under the Food and Drugs Act it is a condition that can be reflected in the cleanliness or even the safety of the final product as it is marketed. In a food factory insect and rodent infestation can contaminate the food from the factory. With the co-operation of Dr. H. E. Gray, Chief, Stored Products Insect Investigation, Department of Agriculture, a basic course upon insect and rodent infestation was given to a selected inspector from each region. These men have trained their colleagues.

New inspectoral districts have been established at Windsor, Ontario, and St. John's, Newfoundland, and a former one at Saskatoon, Saskatchewan, has been reopened. No office has been secured at Windsor as yet, and the Act is not yet proclaimed in Newfoundland; the respective inspectors have been in training, however, and are ready to take over at once.

*Information Centre.* Because of the imperative necessity of keeping all officers outside of Ottawa fully informed, so that uniformity of enforcement is possible, the information centre referred to last year was set up. This unit collects pertinent information, sorts and files it and relays it to the field man. It is also responsible for the dissemination of Trade Information Letters, of which some 19 were despatched during the year to the appropriate sections of the food and drug industries.

The actual number of pieces mailed totalled some 25,000 and evoked a striking interest from the recipients. One of the most interesting was concerned with the labelling and advertising of antihistaminics for colds. Because the manufacturers co-operated to the full with Inspection Services, Canada was not faced with the situation that developed elsewhere, the public were not denied the benefits that might be expected from these medicines and were not exposed to unwarranted claims.

The revised Food and Drug Regulations to which reference was made in last year's Annual Report were duly promulgated and despatched. Some 12,000 copies have been distributed, including very many sent in response to requests. Because the Regulations are not static, both the Act and Regulations were set up as office consolidations in a loose-leaf cover so that amendments could be inserted as received by the addressees. This has proved to be an economical way of proceeding. To assist the user, tables of contents, an explanatory preface, indexes and foot-notes have been incorporated. The format of the Regulations was completely revised and included a novel system of numbering that has proved to be quite successful.

The food and drug industries have shown a great interest in the Regulations and have contributed many valuable suggestions. The inspectors have continually been called upon to point out changes and to explain their import. Their activities and responsibilities have correspondingly increased.

## LABORATORY SERVICES

### Food Chemistry

The work in the Ottawa laboratory was confined chiefly to investigational projects and surveys of food products on the Canadian market. The research involved the development and the testing of methods, since satisfactory methods are a prime requisite of the analyst. The surveys covered a number of food products on the Canadian market and had as their objective (a) the accumulation of information for the setting up of new standards, and (b) the collection of data in regard to the condition and composition of products offered for sale at the present time.

*Antioxidants.* Processors are permitted to add small amounts of specified materials to lard and shortening in order to inhibit oxidation of the fat and thus prolong the shelf-life of the product. However, since the amounts are limited by regulation, it is necessary to have satisfactory quantitative methods for their determination. A sensitive colorimetric procedure has been developed for the determination, individually or in combination, of four of these compounds. It is possible, with this method, to determine accurately a few parts per million of these substances in lard and shortening.

*Honeydew.* A number of samples of authentic honey and honeydew were analyzed in order to determine the possibility of detecting honeydew by distinctive chemical characteristics.

To the beekeeper, honeydew is a specific type of *honey* which is deposited in the combs by the bees. Its source is not floral nectars or other sweet exudation of plants but is usually the secretions of plant aphids and scale insects. The product is similar in composition to honey but usually has a strong molasses-like flavour and a dark colour, reminiscent of buckwheat honey.

It was found that all samples of honeydew had a much higher ash and dextrin content than honey. A number of samples of amber honey offered for sale on the retail market were also examined but these were all found to be pure products.

*Extraneous Matter in Flour, Cheese and Canned Corn.* The battle to eliminate extraneous matter from food products continued. Methods for the separation of rodent and insect filth from flour and baked goods were examined and the most satisfactory selected for use. These methods will be employed in conjunction with factory inspection in an attempt to eliminate unsanitary conditions from the mills. A number of samples of flour sold on the retail market were found to be free of extraneous matter of any kind.

During the year an occasional sample of Canadian cheese was refused entry to the United States. The presence of extraneous matter was given as the reason for this action. A survey was, therefore, initiated and a total of 86 samples of Cheddar cheese from the cheese-producing areas of Ontario and Quebec were examined. Although the majority of the samples were satisfactory, several were found to contain insect fragments and mites were found in an appreciable number of samples. Mites are tiny insects which find their way into the cheese during manufacture or storage and, unless the infestation is very high, would not be detected with the naked eye. Steps are being considered to reduce this infestation.

As in previous years, canned corn was examined for the presence of corn borers and other foreign matter.

***Metallic Impurities.*** A survey was made of the heavy metal content of canned shellfish and other crustaceans sold in the Canadian market. A total of 120 samples were analyzed and, with the exception of one sample of clams having five parts per million of lead, one sample of lobster having 13 parts per million of lead, and one sample of lobster having seven parts per million of arsenic, the values found were not significantly above the limits established for the heavy metal content of foods.

While gelling agents are used only in food products in relatively small amounts they could be the source of appreciable quantities of poisonous metals. Some of these metallic contaminants, the most important of which are arsenic, lead, copper, and zinc, may come from the raw materials and some from the manufacturing process.

In order to ensure that the present limits are in line with the best manufacturing processes, a large number of samples have been analyzed for metallic contamination. Results to date indicate that in all cases, except zinc, the present limits can be met without difficulty. However, an appreciable number of samples contained larger amounts of zinc than the present limit. The investigation is being continued to determine if a change in the regulation is required.

***Fill of Containers.*** In connection with the provision of the Food and Drugs Act that a product shall be deemed to be misbranded if the package is deceptive with respect to fill, the best method of measuring the volume of free-flowing products, such as tapico and rice, has been studied in order that the volume of the contents can be compared to the total volume of the container.

A number of factors, such as packing of the material during transit, filling of packages with automatic machines, and variability in settling due to size of the individual particles, had to be taken into consideration. Several hundred determinations were carried out and a promising method is being developed.

***Sausages and Meat Products.*** A collaborative study on methods for the determination of moisture in meat products was conducted with the co-operation of all regional laboratories across Canada. Methods for the determination of cereal in meat products were also studied.

***Figs, Fig Paste, and Dates.*** The study of methods of sampling and examination of whole figs was carried on throughout the year. On the basis of the results obtained the methods for bulk and packaged figs were revised. Collaborative examinations with the regional laboratories were conducted on whole figs in an attempt to develop greater uniformity in the techniques of the various analysts.

***Collaborative Work.*** Collaborative work was carried out on the recovery of DDT from cream and butter using methods supplied by the associate referee on this subject of the Association of Official Agricultural Chemists. This project had as its object the development of more reproducible methods for the determination of DDT in food products.

## **Pharmacology and Toxicology**

***Arsphenamines and Related Products.*** The number of lots of arsphenamines submitted for assay during the year decreased considerably. It was quite evident that other drugs were replacing the arsphenamines to some extent for the treatment of venereal disease.

During the year a method for the assay of oxophenarsine hydrochloride, based on a graded response technique, was worked out. This method was found to be quite satisfactory for this product. It has the advantage that a test may be completed in one day.

A new standard for neoarsphenamine was obtained during the year. Following the checking of this lot against the International Standard, it was released for use.

*Cardiac Drugs.* An attempt was made to work out an assay method for the digitalis whole leaf products based on survival time after a single injection of digitalis.

Collaborative work was undertaken with the U.S.P. Revision Committee, Biological Standards Division, and A.Ph.A. Committee on Physiological Testing. This collaborative work involved the testing of a new U.S.P. Standard for heparin, International Standard for digitalis and a lyophilized posterior pituitary Reference Standard.

*Enzyme Studies.* A new line of research was opened up by the establishment of a project in enzyme pharmacology. The objective is the elucidation of the mechanisms of drug actions and the application of this information to the development of enzyme assays for drugs where present methods are not entirely satisfactory. This approach may also produce valuable information on the therapeutic efficiency of particular drugs and on methods for counteracting drug toxicities. Antabuse (tetraethylthiuram disulphide) was chosen as the first drug to be investigated. The effects of this material on various dehydrogenase systems of animal tissues is being studied. A method for the chemical assay of antabuse in microgram quantities has been developed in conjunction with the investigation. In addition, some experimental work on the therapy of severe antabuse-alcohol reactions *in vivo* have been conducted.

*Epinephrine Inhalants.* A survey was made of racemic epinephrine hydrochloride solutions sold on the Canadian market. Steps were taken by Inspection Services to see that manufacturers made appropriate declarations on their labels.

*Epinephrine Free from Arterenol.* A number of comparative assays were carried out on lots of epinephrine free of arterenol and epinephrine standard which is known to contain from 10-20 per cent arterenol.

*Hydrolyzed Calcium Gelatin.* This diluent has been reported to prolong the action of several drug products, and it has been recommended as a diluent for morphine, penicillin, certain vitamins and sex hormones.

An investigation was carried out concerning the comparative activity of morphine, d-tubocurarine chloride and oestrone.

*Lithium Salts (Lithium Citrate and Lithium Chloride).* A chronic toxicity study on lithium salts was completed during the year. A number of feeding studies of several months duration were carried out on rats, guinea pigs, and rabbits.

*Analgesic Testing.* Some of the methods used for testing analgesics were studied during the year and involved a good deal of investigation.

Assistance was given to the Narcotic Control Division in determining the analgesic potency of new compounds, some of which were reported to be non-habit-forming.

*Vasopressin.* The inclusion of standards for vasopressin in both the United States and British Pharmacopoeias necessitated a further study of proposed methods for this product. This investigation is not yet completed.

*Miscellaneous.* There were a number of complaints during the year about products, some of which were reported to have caused deaths, others symptoms of intoxication. These were all investigated and in most instances animal feeding tests were done. There was not a single case, as far as could be ascertained, where the product was at fault.

Assistance was given the Department of Agriculture in the assessment of some toxicological data on insecticides.

Ottawa hospitals were also given assistance on a few occasions in working out analytical methods.

Routine biological assays were carried out during the year on the following drug products: arsenical products, curare alkaloids, digitalis whole leaf products, digitalis glycosides, epinephrine products, heparin, local and general anaesthetics, pituitary extract (posterior lobe), oxytocin and vasopressin.

## Physiology and Hormones

*Anterior Pituitary Hormones.* The marked advance made in the production and clinical use of the adrenocorticotrophic hormone (ACTH) in a number of diseases during the past year required this section to spend considerable time and effort in the preparation of a standard and on the assay of the hormone. Through the co-operation of a local packing house, anterior pituitary glands from approximately 7,000 hogs were collected, extracted by recognized procedures and 4½ grams of a purified preparation were obtained.

Preliminary work on the physical and chemical constants and potency evaluation of this standard shows the preparation to be quite comparable to other purified preparations. Work is in progress on modification of assay procedures and pharmacological properties.

*Adrenal Cortical Hormones.* The discovery of the clinical effectiveness of a hormone of the cortex of the adrenal gland (cortisone) in rheumatoid arthritis and allied conditions necessitated gaining experience in the assay of this hormone and a study of the pharmacology and physiology of hormones of the adrenal glands. Work is in progress on the study of assay procedures and tests on experimental screening of different steroids of the adrenal glands for their claimed effectiveness.

*Insulin.* Research work was continued on the variables affecting the assay of this hormone with particular reference to globin insulin with zinc which has been introduced recently to the Canadian market. Efforts were also made to obtain more reliable and practical methods of assay for the zinc and nitrogen content of insulin products.

*Sex Hormones.* A method of assay for testosterone propionate worked out in this section last year has been adopted for inclusion in United States Pharmacopoeia XIV. Participation in a collaborative study with the U.S.P. Revision Committee showed the method to be satisfactory.

Collaborative work was carried out with the U.S.P. Revision Committee on proposed methods of assay for gonadotrophins and oestrogens.

Following work last year on the effects and recovery of ingested stilbestrol compounds in the flesh of poultry, further work was done this year to determine the effects of prolonged administration of these products on experimental animals.

Surveys of market samples of androgens, cosmetic creams containing oestrogens and progestins were completed. A study of a new colorimetric method for the assay of progesterone was made.

## Vitamins and Nutrition

This section continued to participate in collaborative studies with the Association of Official Agricultural Chemists in the microbiological assay of folic acid, with the United States Pharmacopoeia in the microbiological assay of vitamin B<sub>12</sub>, and with the Pacific Fisheries Experimental Station in work on the chemical assay for vitamin A. Methods have been outlined in detail for use among the regional laboratories of the Food and Drug Divisions for collaborative assay of vitamin A in fish oils and capsules and of vitamin C in pharmaceuticals and fruit juices.

During the year vitamin analyses were carried out for many different governmental agencies and other organizations, including the Inspection Board of Canada, Canadian Commercial Corporation, the Department of National Defence, and the Department of Veterans Affairs. The laboratory has also analysed samples for the Nutrition Division and the Indian Health Services of the Department.

As a result of the close liaison with the United States Pharmacopoeia this laboratory has had opportunity to check and study new lots of U.S.P. standards for purity and general suitability. These standards included pyridoxine, menadione, and para-amino-benzoic acid.

The regulations have been amended to include vitamin B<sub>12</sub>, pantothenyl alcohol and synthetic vitamin A. All these are new vitamin sources which have appeared on the market within the last year.

*Vitamin A.* Both biological and chemical procedures for the estimation of vitamin A are being investigated. Studies on factors affecting the results of biological assays for vitamin A are also being made.

*Vitamin D.* Investigations have been continued on the relative merits of the line test and the radiographic method for assessing calcification.

*Vitamin E.* A survey has been completed in which 41 different preparations from 26 companies were analysed for vitamin E and examined for labelling. More than half of the available products were preparations of natural mixed tocopherol acetates. Other products were made up of natural mixed tocopherols and of synthetic alpha-tocopherol and alphanatocopherol acetate. With the exception of seven companies, all products showed good agreement with labelled potency. Some thirteen products were incorrectly labelled. The chief factor causing difficulty in the potency and labelling of vitamin E preparations seemed to be a misunderstanding of the various forms of tocopherols and their physiological relation to each other.

Vitamin E methods, both biological and chemical, are cumbersome and time-consuming. An effort is being made to develop and simplify these procedures.

Since existing chemical methods are tedious and time-consuming, a simpler and more direct method of determining the alpha-tocopherol content of pharmaceutical products is sought. The results of this study were presented before the Research Seminar of the Chemical Institute of Canada.

*Vitamin B<sub>12</sub>.* The vitamin B<sub>12</sub> situation has been followed very closely in collaboration with the Anti-Anaemia and Vitamin Advisory Boards of the United States Pharmacopoeia, and this laboratory took part in the first U.S.P. collaborative study.

## Pharmaceutical Chemistry

*Ephedrine and Other Sympathomimetic Amines.* This section was opened in the latter part of October, 1949. A survey was begun on the various methods of assay of ephedrine, the commercial preparations of ephedrine and related products. Results of the assays of commercial preparations showed that improved methods of assay are required and a new colorimetric method has been developed.

At present, assays are being made on the various types of commercial ephedrine preparations on the market by use of this method. It is too early to predict what degree of success will be attained.

A colorimetric method for the assay of privine has also been developed, but it has not yet been possible to adapt this method of assay to the commercial preparation. Further work will be done in an effort to produce a colour chart which may provide means of distinguishing between the various sympathomimetic amines.

*The Antihistaminics.* Investigational work was begun on the antihistaminics.

*Miscellaneous.* The task of proofreading the proposed United States Pharmacopoeia XIV was carried out in this section and a copy of the proof returned to the Committee on Revision.

A number of drug preparations were received from the Department of Veterans Affairs and Central Medical Stores for purposes of analyses. The qualitative and quantitative analyses of all such preparations received were completed and reports submitted.

One of the preparations received for routine analysis was labelled Amino-phyllin Tablets, but chemical analyses and pharmacological tests showed it to be a barbiturate which was believed to be phenobarbital. The manufacturer was immediately notified and the entire lot was recalled by the firm.

Some tests were conducted on tablet disintegration time on a few commercial preparations. Some of them were found to be entirely unfit for use. The manufacturer was notified in each case and the particular lots were recalled.

Certain compounds were assayed for the Standards Committee on the United States Pharmacopoeia XIV.

### Organic Chemistry and Narcotics

Investigations undertaken in this section dealt mainly with the separation, identification and other chemical reactions of narcotic drugs which can be classified as follows: (1) Natural Raw Products—opium, coca leaves, marijuana; (2) Manufactured Drugs—morphine, codeine, thebaine and metopon; (3) Synthetic Drugs—amidone, demerol, morphinane and their analogues.

*Opium.* In co-operation with other countries, parties to the International Opium and Narcotic Conventions, Canada is participating in a plan of research to develop methods for identifying the country of origin of opiums by chemical and physical means. In Canada, work is being carried out with the full help of the Narcotic Control Division in the Organic Chemistry and Narcotic Section, and in the Department of Pharmacology, University of Toronto. The main object of the work is to take opium apart chemically, swiftly and more accurately to see how the pieces of the different kinds from different countries compare.

A study is also in progress to increase knowledge of the fundamental chemistry of opium alkaloids. This information is essential for better understanding of the whole problem of the determination of country of origin of opium.

*Identification Studies.* Rapid development of new narcotics has been achieved throughout the world since 1939. This research has been conducted along two lines to achieve a synthesis of morphine and to find a substitute for morphine which will attain its analgesic potency and not have its harmful physiological side reactions.

As a result of this work several hundred new analgesics have been synthesized and are now available, such as demerol, amidone, heptalgin, pipidone, metopon and morphinane. These drugs all have addiction-liability and are now covered by International and National Narcotic Laws. This makes it essential for those engaged in chemico legal work to have means of identification.

Micro chemical reactions for the identification of metopon have been published by this section, and for the identification of synthetic narcotics, amidone, heptalgin, pipidone and demerol. Other work in identification of narcotics is in progress.

*Consultative Duties.* One of the main reasons for organization of the organic chemistry and narcotic section is to act in a consultative capacity on

technical aspects of existing narcotic problems and in the field of organic chemistry. One such problem is the revision of the narcotic schedule and advice has been given to the Narcotic Control Division for this purpose.

As part of the lecture course conducted by the Narcotic Control Division for R.C.M. Police officers, instruction was given in narcotic identification by chemical tests which are useful in the field. The officers are equipped to distinguish narcotic drugs from other materials encountered in their normal course of duties.

*Extended Investigation of Routine Samples.* From time to time samples were submitted, usually by the Narcotic Control Division, for further work, i.e., (1) to check on results already obtained on previous analysis, (2) to establish types of adulteration, (3) to increase the information where further knowledge about the sample is required. These samples were not classed as routine but as applied research investigations.

*Routine Sample Analysis.* Suspected narcotics seized in the Ottawa region are analysed in this section. In 1949, 91 samples were submitted for analysis and of these nine were positive and required certificates. This is few in comparison to the number of narcotic analyses handled by the regional laboratories and leaves time for the accumulation of the fundamental knowledge necessary in designing identification tests for new synthetic narcotics.

### **Cosmetics and Alcoholic Beverages**

Work carried out on cosmetics during the year fell into two categories (1) investigations relating to methods of analysis, partly in collaboration with the United States Food and Drug Administration, and (2) examination and analysis of commercial samples.

In the first category came collaborative studies on the determination of glycerol and certain glycols in skin lotions, and the composition of lipstick colours. In the second category were reviews of depilatories and hair colourings, and the examination of miscellaneous single samples. A number of depilatories were examined in connection with the investigation of a new preparation for which unorthodox claims were made. Apart from this particular preparation, nothing new was noted.

Hair colours were also reviewed, mainly because some of them were being put forward as *hair-growers* or *dandruff removers*. Practically all of the well-known colouring agents were represented. It was pointed out to a number of manufacturers that the claim to restore natural colour to hair was not permissible.

*Alcoholic Beverages.* The section dealing with alcoholic beverages continued the review of domestic wines begun last year and analyses of some fifty wines are now on file.

*Food Colours.* The colour section has prepared revised regulations applying to food colours. The application of newer methods including polarography have been studied in connection with the determination of trace metals.

### **Biophysics**

A study of the accuracy of gauges indicating delivery of anaesthetics from anaesthetic gas machines which was commenced last year was completed and a report submitted. As it was impossible to retain the services of the physicist in this section the work was temporarily suspended.

### **Biometrics**

This section was organized in August 1949, for the purpose of providing advice on the statistical aspects of the work done by the Food and Drug Divisions.

The most urgent need was for a revision of the sampling schemes used in the examination of lots of bulk food products, such as dried fruits, nuts and canned goods. Procedures were outlined and tables computed for the sampling of figs and dates, which were designed to provide an adequate basis for action under the Food and Drugs Act.

Other problems dealt with by the section since its establishment concerned the design and analysis of biological and chemical experiments. The Food Chemistry and Vitamin and Nutrition Sections, for example, were aided in the planning and analysis of collaborative studies between the regional laboratories on the examination of food products such as figs, dates, raisins, and prepared meats, and vitamin A preparations. The Pharmacology and Toxicology Section was advised on certain aspects of their biological assays of digitalis and pituitary extract.

The facilities of the section were also made available to other divisions and departments of the government service on request. A course of lectures on the use of statistical methods is being given. The section was also approached by the Army Medical Corps for help in the analysis of some data.

### PROPRIETARY OR PATENT MEDICINES

In administering legislation controlling all secret formulae proprietary medicines, the Proprietary or Patent Medicine Division was instrumental this year in raising the standard of such medicines and in eliminating undesirable products. Care was taken to see that ingredients used in formulae had value for purposes for which they were recommended and to ensure that drugs were within reasonable safety limits fixed by an advisory board.

Registrations of 3,731 preparations were reviewed. Of 302 new medicinals submitted for registration, 173 were registered and 129 refused, so that a total of 3,904 licenses were issued for the year.

With the object of giving the public truthfully labelled and advertised products, 2,046 labels, wrappers and newspaper advertisements were examined and approximately 10,500 radio commercials, submitted prior to broadcast in accordance with Canadian Broadcasting Corporation regulations, were reviewed to check on exaggerated, misleading or false claims.

Many manufacturers were interviewed and assisted in preparing their applications, revising radio script and other forms of advertising. In general, they were co-operative, having found that regulations were helpful in improving standards to which proprietaries must conform and thereby increasing public confidence in reputable products.

The advisory board continued to review and decide whether the medication of liquid medicinals containing alcohol in excess of 2½ per cent was appropriate and sufficient to render them unfit for use as alcoholic beverages, and to advise on and fix dosages for scheduled drugs.

A close check was kept on new drugs, new combinations and new knowledge respecting the action and uses of old drugs. These drugs are given careful consideration by the department's medical officers and technicians and by the advisory board, who decide what products may be used with safety and prescribe limitations, where deemed appropriate.

The medical officers and the advisory board opposed the use of lithium salts and the antihistamines in proprietary medicines and prohibited preparations containing carbolic or acetylsalicylic acid for internal use of children under one year.

## INDIAN HEALTH SERVICES

While operating a departmental network of hospitals, nursing stations and other health centres, and providing or arranging for active treatment of disability among the Indians and Eskimos of Canada, the Indian Health Services continued, during the past year, to carry on a vigorous program of public health work.

On occasion, it was necessary to pursue not only the program but its beneficiaries, since the degree of self-discipline demanded by modern medical care is unfamiliar to the nomad. In the pursuit, medical officers and nurses of the Service had occasion to use every modern means of transport and some which are strange to the more settled areas. In many far-off places in Canada, the dog-drawn sleigh and komatik, freight canoes and freight cabooses, saddle and carry-all, are still the only vehicles available or practical, even in this atomic age.

As Indian Health work expanded, so did the population to be served. In spite of regular losses to the general population, either by imperceptible assimilation or by enfranchisement of some 500 persons per year, the native population was increasing. According to the 1944 Census, there were then 125,686 Indians and 7,700 Eskimos in Canada. The birth rate varies greatly in different groups but, on the average, is about 45 per 1,000. The death rate varies similarly but may be said to be about 15 per 1,000. It is estimated that, in 1950, the Indian population will be about 136,000 and the Eskimo about 8,500.

### Facilities

For the health care of the native peoples, the department maintained 21 hospitals, providing 1,877 beds and 66 bassinets, 22 nursing stations with 84 patient beds, and 58 other health centres, from which medical officers or graduate nurses ministered to the inhabitants of the surrounding areas.

New facilities established during 1949-50 included Sioux Lookout Indian Hospital, of 64 adult beds and six bassinets, nursing stations at Fort Chimo and Port Harrison, in the Ungava district of the province of Quebec; Big Trout Lake in northwestern Ontario, God's Lake in Manitoba, Lake Harbour, southern Baffin Island, and a seasonal dispensary at Barriere, Que.

A field nurse was established at Pointe Bleue, Que., and another at Fort St. James, northern British Columbia, a medical officer at Punnichy, Sask., and additional field nurses at Sarnia, Ont., and Whitehorse, Y.T. In addition to the staffs in departmental hospital and nursing stations, there were, in the field, 23 full-time medical officers, five dental surgeons and 43 graduate nurses.

Clothing this framework of departmental facilities, arrangements existed with private practitioners, community hospitals, provincial health services and lay dispensers to assist in the work of the service. Some 64 physicians and 16 dispensers occupied part-time positions, but the bulk of professional attention was provided by practitioners receiving fees-for-services. Accounts were received regularly from 1,250 physicians, 125 dentists and 600 hospitals, but the numbers treating native patients from time to time were much larger. Supplies of medicines and dressings were provided to all outposts and Indian groups and were dispensed by a host of missionaries, traders, police and other officials, who embrace the health care of the natives within their compassion.

Canada's Indian Health Service is unique in that it has arisen, not from legislative obligation, but rather as a moral undertaking to succor the less fortunate and to raise the standard of health generally. Because of the great dispersal of the Indians, and even wider dispersal of the Eskimos, the provision of trained medical assistance to all of them would be prodigal, even if sufficient

ould be found. The outer fringe of the service must, therefore, consist in lay persons whose sense of humanity, even more than their sense of duty, is enlisted. Without these voluntary lay dispensers, the service would remain a skeleton only.

### **Accomplishments**

Departmental establishments alone admitted some 8,500 Indians and Eskimos for treatment this year. The number under treatment in non-departmental hospitals was 23,500. The patient days of treatment were in the order of 600,000 and the number of out-patient treatments and home visits is known to have been well over 60,000.

Considered of even greater importance was the preventive and case-finding work. It is the aim of the service to reach every native child and to maintain full protective inoculation against the common communicable diseases. To this end, the staff is augmented each summer by as many extra nurses as can be attracted and 22 selected students of medicine were used in the past year.

The summer months are the harvest period for this work for, at this time, the annual official visit is paid to those Indians who are in treaty, and all Indians are more likely to be congregated, for business or festival, at certain known dates. The Eskimos, likewise, linger about the trading posts in summer because it is a poor time to travel or hunt and because the arrival of the supply vessels present splendid opportunities for reunion. Advantage is taken of these customs, by placing medical officers and survey groups on the larger northern vessels.

Indian Health Service has pioneered in the practical extension of vaccination against tuberculosis by the Bacillus Calmette-Guerin vaccine. In this fiscal year well over 4,000 native children were inoculated by departmental officers. In addition, a number of hospitals in Quebec, Ontario and New Brunswick vaccinate Indian babies routinely.

Case finding—in particular for tuberculosis—continued to be a major part of the service's program. Tuberculosis is known to be many times more prevalent among the northern Indians and the Eskimos than among other groups. Case finding is of the greatest value, not only in getting known cases out of circulation and under proper care, but in indicating groups requiring prior attention.

During the past year more than 60,000 chest plates were taken by the Service. Each departmental facility was a centre for this work and there were eight mobile teams in operation during the summer of 1949. In addition, a proportion of community hospitals now film all new admissions and these, as well as the mass of information collected by provincial health organizations, all contribute to the case finding program.

### **Improvement of Facilities**

While new treatment centres were being established, there was a steady process of metamorphosis to increase the internal efficiency and capacity of existing institutions, resulting in an over-all addition of 215 more treatment beds. There was a concomitant improvement in staff accommodation, an item of major importance in a service operating mainly at a distance from the ordinary amenities of urban life.

A considerable portion of the larger treatment centres were former Department of National Defence hospitals. Built under stress of war, they lacked services and utilities adequate for permanent full-capacity use. Gradually, however, proper power and laundry services are being added and such projects were completed at Miller Bay, near Prince Rupert, and at Fort Qu'Appelle, Sask. Another was in progress at Charles Camsell Indian Hospital, Edmonton. The 155-bed hospital at Moose Factory, Ontario, approached completion at an

accelerated rate. Also under construction, but not completed, were five health centres in Ontario and Quebec and a 30-bed hospital at Norway House, in northern Manitoba.

## **Tuberculosis**

The death rate from tuberculosis, in the white population, in 1948 was 32.4; among Indians it was 480.1 per 100,000 of population. In 1947, the Indian rate was 549.8. Preliminary figures indicate that the decline between 1948 and 1949 will be in the order of 30 per cent—tangible evidence that strenuous case finding and expanding treatment facilities are producing striking results.

Ten years ago, about 100 Indians were under active treatment for tuberculosis. In January 1950, there were 2,248. There is still much to be done, but vigorous health education and a raised standard of living are expected to smooth the way. Authorities see nothing to indicate that the Indian and Eskimo are not as sturdy as any other stock. But there is reason to believe that a changing way of life, without accompanying appreciation of good health habits, can result in high morbidity.

During the year 1,300 patients were admitted to departmental sanatoria for treatment of tuberculosis. Another 1,100 were treated in provincial institutions. Streptomycin, and streptomycin with para-amino-salicylic acid therapy, have produced striking changes. Modern chest surgery has been even more dramatic. All such advanced treatment methods are used to the limit of trained personnel.

In Charles Camsell Indian Hospital there were 149 major chest operations and 26 on bone and joint. In the departmental hospitals in Manitoba, the figures were 50 and 53. The number of pneumothorax and pneumoperitoneum treatments were in the order of 7,500 and 11,000 respectively.

This advancing therapy has changed the whole aspect of the disease, as far as Indian Health Services is concerned. Whereas, ten years ago, the departure of an Indian to a sanatorium was accepted as a death sentence, in the past fiscal year more than 2,000 have been discharged from treatment with the disease under control. This demonstration of improved prognosis has converted a formerly resistant and hostile native attitude to one of active co-operation. Now, Indians come hundreds of miles to knock at the door of institutions already filled beyond rated capacity.

## **Epidemics**

The usual incidence of common communicable disease was observed generally this year. In two instances these assumed epidemic proportions. In the area of the Mackenzie River delta, centering on Aklavik, there were 300 cases of measles in December, through February, in a population of some 2,500. There were 14 deaths. Measles is a more lethal disease among natives because they are extremely difficult to restrain once convalescence commences and, in a rigorous climate, a proportion fall prey to sequelae. As is almost invariably the case in the Far North, the disease was introduced by a white visitor.

In northeastern British Columbia, about Halfway River, there was an epidemic of diphtheria, affecting 54 out of a population of 90. Although these people had received sporadic inoculations, they were not fully protected for, being nomads, the only way to accomplish full protection would have been to follow them for the necessary number of weeks. Staff could not be spared, of course, for every group of this nature. Occurring in December and January of an exceptionally severe winter, the epidemic imposed a formidable task on the nursing service. Nevertheless, the work was carried out in such a manner that the departmental nurse, as well as her provincial counterpart, received the first two British Columbia Provincial Medallions, in recognition of "service above and beyond the call of duty".



From nomadic bands on far-off trap-lines, native people brought their troubles to nursing stations, health centres and hospitals of the Indian Health Service.

### **Professional Information**

While Indian Health Services does not engage directly in research, both the directorate and the field officers were aware of the potentialities within the native population and, by close co-operation with scientific groups, encouraged investigations on health problems. In this connection, for the past two summers, a medical research group from Queen's University Medical School has carried on work among the Eskimos at Coral Harbour, on Southampton Island. During the summer of 1949, a parasitologist from the University of Toronto visited Lake Harbour, Baffin Island. Both investigations were given practical assistance and both are expected to return.

Officers of the Service were encouraged to attend all local professional and scientific conferences. Hospital and field nurses attended courses on public health, control and treatment of tuberculosis, etc. Within the provisions of existing authority, refresher courses were arranged for a number of medical officers and nurses.

Departmental officers were authors of an article on trachoma and a very comprehensive report on the epidemic of poliomyelitis among the Eskimos of Chesterfield Inlet, in 1948-49. Departmental hospitals entertained both professional and lay groups and staff members addressed similar groups to explain the work carried on by the Service and the experience which had been accumulated. Through such exchanges, understanding and co-operation flourished and much benefit accrued to patients and staff.

### **Educational Publicity**

The dissemination of public health education to Indians and Eskimos encountered language difficulties, but full advantage was taken of visual aids, through selected moving pictures and filmstrips, accompanied by suitable commentary. This often had to be translated through an interpreter. Posters were used effectively, with inscriptions in syllabics, adapted for both Indians and Eskimos. Calendars, illustrating points on health and the proper use of Family Allowances, received wide distribution.

The larger sanatoria circulated a hospital paper, for the entertainment and instruction of the patients. In the Far North, the wide use of radio by Indians and Eskimos presented opportunities which were grasped by medical officers and nurses, and short talks on medical subjects were regular features at some local stations. The radio was used extensively, also, for passing advice and for advertising the proposed visits by medical officers, nurses or medical survey groups.

### **Co-ordination of Facilities**

Assuming commitments in every remote segment of the country, Indian Health Services was keenly aware of the need for that close integration with other health agencies without which its task would be impossible. Facilities were exchanged with the treatment services of the Department of National Defence and the Department of Veterans Affairs, at many points. The Signal Services of the Department of National Defence and of the Department of Transport, as well as commercial licencees, were used extensively all over the North. The transport facilities of the United States Air Force, the Royal Canadian Air Force, provincial and private air operators, were extended generously for medical missions. Busy services of all types gave priority to medical traffic, without consideration of time or reward.

The closest co-operation has existed between the officers of Indian Health Services, in their role of family physician and public health nurse, and the Indian Affairs Branch of the Department of Citizenship and Immigration, administering persons of Indian status, and the Northern Administrations of the Department of Resources and Development, who look after the Eskimos. This fine relationship was particularly advantageous, for, while each had its special functions, the combined resources of the cooperating departments were thus focused upon the native peoples.

In the Northwest Territories, Indian Health Services have extended professional guidance to the Administration, and medical officers have provided attention where other services were not available.

Since the local practitioners and community hospitals were in most intimate contact with the large proportion of the Indian population, the weight of active treatment fell upon them. Without their patience, sympathy and generous co-operation, a successful program, such as that which has been carried on, would have been impossible.

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## WELFARE BRANCH

Services of the Welfare Branch, embracing the Family Allowances administration and the Old Age Pensions and National Physical Fitness Divisions, continued this year to apply, encourage and co-ordinate measures for ensuring social well-being.

Newfoundland signed an agreement applying to that province provisions relating to Old Age Pensions and Pensions for the Blind. An agreement extending similar benefits to its residents was signed with the Yukon Territory Administration.

Ontario joined the federal government and other provinces this year in the National Physical Fitness program.

Grants were again approved of \$50,000 to assist the seven Schools of Social Work in Canada. An eighth school was started in 1949 at St. Patrick's College, University of Ottawa, and an additional sum of \$2,500 was included in Supplementary Estimates to provide assistance to it.

Programs were arranged this year by the Welfare Branch for three United Nations Social Welfare Fellowship holders, one from Finland, one from the Philippines and one from Ecuador.

### Welfare Expenditures

Family Allowances payments for the 12 months ended March 31, 1950, totalled \$297,911,784.

The federal contribution during the year to the cost of Old Age Pensions was \$89,652,203.32, while \$3,536,730.97 was paid to the provinces to apply towards Pensions for Blind Persons.

Under the National Physical Fitness Act, approximately \$154,297.85 was contributed by the federal government to the provinces taking advantage of this plan.

## FAMILY ALLOWANCES

Nearly 615,000 more families received Family Allowances in March, 1950, than when this federal plan began in July, 1945.

The Family Allowances Act was passed in August, 1944, and went into effect in July, 1945, when first payments were made to 1,237,754 families on behalf of 2,956,844 children. Almost five years later, in March, 1950, payments were made to 1,852,269 families in respect to 4,202,263 children. It is to be noted that the latter figures include 50,694 Newfoundland families with 139,571 children. A year earlier, that is in the month of March, 1949, Family Allowance were paid to 1,729,150 Canadian families. The increase in the number of families from March, 1949, to March, 1950, was 137,844. However, to get a true comparison it is necessary to subtract the Newfoundland families from this total. It will then be seen that the increase in the number of families in pay for Family Allowances, in the rest of Canada, was 87,150 families in the year ending March 31st, 1950.

This sizeable increase is accounted for in part by a continued high post-war birth rate, but more through the reduction in the waiting period for new families coming into Canada to one year. Previously, children coming into Canada had to wait three years before becoming eligible for Family Allowances.

### Year's Highlights

Principal features of the fiscal year ended March 31, 1950, with respect to Family Allowances may be summarized as follows:

#### (a) *The Payment of Family Allowances in the Province of Newfoundland:*

Newfoundland children became eligible for Family Allowances in April, 1949, and first payments were made in that month to more than 40,000 families. During the fiscal year the total amount of Family Allowances paid in Newfoundland amounted to \$9,752,377. Registration prior to payment of Family Allowances in April, 1949, had been remarkable effective. The accounts were approved rapidly and most eligible families began to receive their payments from April, 1949.

Indications from Newfoundland throughout the year were to the effect that Family Allowances have been of decided importance socially and economically. School attendance has been stimulated quite remarkably. Purchases of children's clothing and shoes have greatly increased. An assured amount of cash income has been going to many homes where money had been scarce and uncertain. Many letters from Newfoundland parents show the improvement due to Family Allowances and reports from social welfare officers and others are to the same effect.

It is believed that the importance of Family Allowances in Newfoundland warrants the inclusion in this report of quotations from a parent's letter in that province:

Upon receipt of the first Family Allowance cheque one year ago I decided to keep a record of all purchases.

Previously, I could not clothe and feed my children "of which there are ten" and pay for their education. My oldest son had reached the age of eighteen years and did not complete the third grade. Each of the next four children of school age are similarly behind because of their lack of clothing and not being able to attend school.

In accordance with my plan of keeping a record of my Family Allowance expenditures, I am making a list of purchases by items with the total cost to show you how this money has been spent. My wife and I sincerely thank you.

Here is the list of purchases made with Family Allowance cheques for one year, for nine children ranging in age from two to sixteen years:

Boots, shoes, gaytees...	\$114 33	Boys' jumpers, wind-	
Stockings, socks .....	29 70	breakers .....	\$ 61 00
Skirts .....	51 05	Boys' rubber raincoats..	27 50
Sweaters .....	26 03	Tots' raincoats .....	5 58
Pants and Breeches ....	63 21	Tots' dresses .....	9 90
Overalls .....	11 70	Handkerchiefs .....	3 56
Tots' wollen suits .....	9 58	Gloves and mitts .....	11 55
Blankets .....	16 75	School bags.....	14 23
Caps and tams .....	9 67	Fountain pens .....	2 36
Underwear, bloomers ..	42 76	Mechanical pencils ....	2 45
Boys' slack suits .....	27 25	Snow suits .....	26 50
Tots' slips and skirts...	14 32	Boys' Parkas .....	37 50
		1 cart for invalid child..	12 75
		Mattresses .....	40 00
	416 35'		
			254 88

Total .....\$671 23

In addition to the above there is an unlisted amount for pencils, scribblers, pens, ink, erasers, exercise books, school books, fresh fruits and milk.

Once again, we say a sincere thanks.

A Newfoundland Parent.

#### (b) *Two Changes Made in the Year in Family Allowances Legislation:*

There were during the year two important changes in Family Allowances legislation: (1) an elimination of the provision in the Family Allowances Act by which deductions in the rates payable to children beyond the fourth in any family had been required, and (2) a reduction in the waiting period from three years to one year for children in families newly entering Canada.

It had been urged for some time that it was unfair to families having more than four children under sixteen that the additional children should be subject to deductions in Family Allowances payments as provided for by the Family Allowances Act of 1944. This view was accepted by Parliament with a consequent amendment to the Act effective April, 1949. Some 160,187 families involving 333,626 children were affected. The extra amount required throughout Canada came to \$543,731 monthly. An additional sum of more than \$6,500,000 annually had to be provided for Family Allowances when this change became effective.

In regard to the reduction in the waiting period for Family Allowances for newcomers to Canada, a sizeable administrative problem was involved in reaching these families to advise them of their new rights. Many had applied for Family Allowances previously while they were still ineligible, not having been in Canada three years, and others knowing of their ineligibility, had not endeavoured to register. In consequence, to reach all these families various means had to be used including direct correspondence and newspaper and radio advertising. It is believed that almost all were reached within a

relatively short period. The result of the earlier payments has been to make the lot of new families in Canada somewhat easier during a period when their resources are limited and when their family needs are likely to be considerable.

(c) *An Emphasis on increased Public Information Regarding Family Allowances*

It had been found that considerable numbers of families had lost one or more months' Family Allowances by failure to register newborn children for Family Allowances within thirty days of birth. These losses to parents ran in total to many thousands of dollars each month. It was felt incumbent upon the Family Allowances administration to bring home to parents the need for prompt registration for Family Allowances, and various means were used to this end, including notices with cheques, posters in public places, a notice on the registration form itself and in other ways.

A booklet *You and Your Family*, which had been in preparation for some time, was completed and application cards for it were inserted with Family Allowances cheques. Parents were invited to apply for the free booklet. Not all provinces had been covered by the end of the fiscal year but more than 400,000 requests had been received of which the majority had been met. The booklet gives a rather complete résumé of the principal facts concerning Family Allowances, indicating as well suggestions for their use. Moreover, it contains valuable information on family budgets and on many aspects of family and child health. Its reception has been excellent and a lively demand for it continues.

In order further to acquaint families with facts regarding Family Allowances and in particular with the responsibilities of families regarding notification on factors affecting eligibility, such as improper absence from school or juvenile employment, inserts with the cheques have been used. Direct advertising by newspapers and radio was used in Newfoundland and also in Canada generally when changes in legislation, already referred to, gave additional rights to families in regard to allowances. Posters have been prepared for use in Post Offices on such subjects as change of address, and in hospitals throughout Canada on the matter of prompt registration of newborn children for Family Allowances.

It is felt that the proper administration of Family Allowances demands continuous efforts so that Canadian families may know both their rights and their obligations in respect to this legislation. With tens of thousands of new families being formed each year with no previous knowledge of the wide publicity given to Family Allowances in 1945, it is essential that every effort be made to bring home to these families, as well as to those who have been in pay, important aspects regarding Family Allowances.

(d) *Relations with Child-Caring Agencies; Balances Held in Trust Accounts:*

During the fiscal year a general directive on the matter of the management of Family Allowance accounts by child-caring agencies throughout Canada was prepared and issued. This directive resulted from changes in the Regulations giving authority to prescribe terms and conditions under which child-caring agencies should receive, use, and account for Family Allowance payments. Considerable groundwork was done with child-caring agencies prior to the issue of the directive and a great deal of effort was given subsequently to its application. The result has been general acceptance and implementation by the child-caring agencies of the requirements of the directive.

Payments were being made to child-caring agencies in respect to 14,636 accounts in Canada by the end of the fiscal year. The principal aim of the directive is to secure desirable uniformity among the child-caring agencies regarding the use of Family Allowance funds.

One of the principal areas of administrative interest in the past year has been to survey the balances held in trust accounts by child placing agencies on behalf of children for whom payments of Family Allowances are made to agencies. While the number of accounts is 14,636, some 30,687 children are concerned. The various agencies have been given direction as to the types of expenditure they may make from Family Allowances accounts on behalf of these children. They are permitted, for instance, if they so desire, to pay an amount up to \$4 per month as a supplement to their ordinary board rate. Other expenditures permitted and encouraged have to do with immediate needs of children beyond those needs ordinarily met from child welfare agencies resources. Some times this means extra clothing, dental or optical care beyond the ordinary, provision of educational or recreational facilities, pocket money or provision by accumulation for future needs in cases where wise planning for the individual child would seem to point toward provision for future needs.

The amounts of balances held in trust accounts by child welfare agencies in each of the provinces at the end of each of the last four calendar years are shown in Table 18, page 131. In general it will be seen that there has been a decided increase in the expenditures made in each year in relation to receipts. By far the largest balance, that of \$749,726.20, is held in Ontario. This, however, is held on behalf of 14,084 children, almost half of all those children in Canada who receive the benefits of Family Allowances through child welfare agencies accounts. Moreover, the percentage of expenditures against receipts, at the end of 1949, in Ontario, exceeds 91 per cent and the per capita balance as of December 31st, 1949, was only \$53.23. An examination of the average balances per child is revealing. With an average monthly receipt of \$6 per child, balances do not exceed on an average more than 8 to 9 months' Family Allowances. This is not considered excessive.

The administration of Family Allowances is much encouraged by the manner in which child welfare agencies have come to manage these accounts and by the evidence of their judicious use of them as their experience with Family Allowances lengthens. The whole field of these trust balances in child welfare agencies is one that is felt to be of very considerable importance and close liaison is maintained by the Regional Family Allowances offices and the agencies in the respective provinces in order to bring to this subject the attention it merits.

In this general field, the agreements made between the Department of National Health and Welfare and the provincial Departments of Welfare, child-caring agencies, and in some instances municipalities, by which arrangements investigations are carried on in the child welfare field and reports submitted to the Regional Offices of Family Allowances, have been continued. More than 4,500 such reports were provided in 1949-50. One new agreement, that between the Department of National Health and Welfare and the Department of Welfare of the Government of Newfoundland has been made. This agreement should result in considerable stimulus to the welfare services in Newfoundland.

### **Examination of Tables**

Attached to this report are a number of tables of Family Allowances statistics. (See pages 116 to 132.) Some points of interest in these tables are as follows:

#### **(a) Family Allowances Payments (Table 5)**

The increase in total payments between the two fiscal years amounts to more than \$26,000,000. This figure represents very much more than the annual increase to be expected in Canada due to normal factors such as population growth. Besides the increase in the year ending March 31, 1950, due to the

inclusion of Newfoundland (more than \$9,750,000), there were two other principal causes for the large increase. One was the change in legislation already referred to, eliminating the reduced rates of payment for children beyond the fourth in any family; this change added more than \$6,500,000 to the costs of Family Allowances in the last fiscal year. The other change in legislation reducing the waiting period for children newly arrived in Canada from three years to one year cost in the neighbourhood of \$1,500,000 in the last fiscal year. The total increase in payments, therefore, due to these three unusual factors was more than \$17,750,000. The increase that may be accounted for by normal causes is an amount somewhat in excess of \$8,000,000. This compares with an increase between the fiscal years ending March 31, 1948, and March 31, 1949, of approximately \$7,200,000.

(b) *Number of Families and Children in Pay for Family Allowances (Tables 6 and 8.)*

In March, 1950, the number of families in pay was 1,852,269 and the number of children 4,202,263. While Canadian birth rates tended in 1949 to level off or even to show a slight decrease from the high post-war rates, this tendency at the end of 1949 and in the early months of 1950 appeared to reverse and there has been a slight upswing in the latter months of the fiscal year. However, there will be no sudden increase in future in families and children in pay, compared with that caused by the amendment in the Family Allowances legislation reducing the waiting period for immigrant families from three years to one, and compared with the much more important addition in numbers due to Newfoundland's entry into Confederation.

(c) *Comparative Statement of Family Allowances Paid in March, 1950, and in March, 1949 (Table 10)*

Examination of the second part of this table shows that *families in pay*, increased by more than 7 per cent. The highest *percentage* increases, other than in the Northwest Territories and Yukon, were in the provinces of British Columbia, Alberta and Ontario. Increases in the *percentage of children in pay* were greatest in British Columbia, Ontario and Alberta, respectively. These increases, both in families in pay and children in pay, reflect to a considerable degree the increase in immigrant families eligible for Family Allowances due to the change in legislation already referred to, as well as the movements of families between provinces in Canada. The latter cause is the more important, as subsequent discussion of Table 11 will show.

The amendments to Family Allowances legislation may in some instances produce effects that appear contrary to one another. For example, while the increase in the number of *children in pay* for Family Allowances between March, 1949, and March, 1950, was 63,780 in Ontario compared with 48,364 in Quebec, yet the increase in *amount of Family Allowances paid* in Ontario was \$448,973 as compared with \$568,547 in Quebec. This is accounted for by the fact that the amendment to the legislation eliminating deductions in Family Allowance payments in families beyond four children affected more families in Quebec than in Ontario.

(d) *Transfers of Accounts Between Provinces (Table 11)*

Examination of this table will show that the following provinces had more families transferred in than out: Prince Edward Island, Quebec, Ontario, Alberta, and British Columbia. The greatest gains in such transfers were shown in Ontario, Alberta, and British Columbia. It will be observed that while Ontario gained as many as 1,043 families on transfer, Quebec gained by 16, Alberta gained 1,074 and British Columbia nearly 800. On the other hand

provinces showing net losses on movements of families include Newfoundland, Nova Scotia, New Brunswick, Manitoba and Saskatchewan. The most marked losses are shown in Saskatchewan, 1,781; New Brunswick, 552; and Nova Scotia 425. These movements in families are of considerable importance in assessing the economic and social currents prevailing in Canada. They are very useful in forecasting housing needs and other requirements inherent in sizeable population shifts.

*(e) Birth Verification (Table 13)*

It will be seen that out of several million births that have had to be verified since the inception of Family Allowances, the balance remaining March 31st, 1950, was 156,821. The balance on March 31, 1949, was 144,000. The increase is accounted for by the fact that during the year Newfoundland children came into pay to the number of 139,571. Of these Newfoundland children there are 30,528 whose births remain to be verified at the end of the fiscal year. Subtracting this number from the total balance unverified at the end of the fiscal year there is a balance of 126,293 births unverified in the remaining Canadian provinces. This figure, 126,293, is the one comparable to last year's 144,662. Since birth indexes become available usually four to six months after births occur, there will be at any time in the neighbourhood of 100,000 births awaiting verification. It will be seen, therefore, that the backlog of births remaining to be verified has been practically eliminated. In Newfoundland about one-fourth of the births remain to be verified. Progress during the past year has been rapid, however, remembering that Family Allowances in Newfoundland are just one year old.

In Quebec, while 88,000 births remain to be verified, progress has been steady as will be seen by comparing the figures at the end of the fiscal years 1948, 1949 and 1950, respectively. That 88,000 still remain in Quebec is due to the delay in availability of birth records for verification purposes in that province during 1945 and 1946. Quebec is steadily reaching the position of other provinces, so that during 1950-51 it is expected that the point will be reached there where current births only will await verification. Actually while 88,000 are shown as a balance unverified, a large proportion of these have been checked as correct by the Family Allowances administration, and only await acceptance into provincial records before they become technically "verified".

### **Other Features**

During the fiscal year relatively few changes in senior personnel occurred in the administration of Family Allowances. Mr. J. K. Balcombe, the Welfare Supervisor for the British Columbia Regional Office resigned after having given invaluable services to this Department. One employee, the Supervisor of Welfare Services for the Nova Scotia Regional Office, Mr. G. P. Allen, was on leave of absence without pay, while doing postgraduate studies in the social welfare field at McGill School of Social Work.

While Social Welfare Supervisors in each of the Regional Offices had been provided earlier, it had not been possible to secure persons with suitable professional and other qualifications for appointment as assistants. During 1949-50 qualified persons were secured and appointments were made to the offices in Alberta, Saskatchewan, Manitoba, Ontario, Quebec and Newfoundland. At March 31, 1950, 23 persons were employed in the social welfare field either as Welfare Supervisors or assistants in the various Regional Offices.

The work of the Welfare Supervisors and their assistants, just referred to, is important. One indication of their activity will be seen in the fact that

during the fiscal year they conducted 4,571 welfare investigations. These involved, for example, determination as to the proper parties to receive Family Allowances or investigation of charges to the effect that certain families were not using Family Allowances for the intended purposes. Experience has shown that a high proportion of such charges were not substantiated. This was already pointed out with detailed statistics in the annual report for the Department for the year ending March 31, 1949. Nevertheless it is necessary that proper investigation be carried out and recommendations be made to the Regional Director in certain cases to change the payment to another person, or even to provide that the payment will be made through a child-caring agency or through an administrator.

In addition to the welfare investigations carried out directly by the social workers in Regional Offices, 4,500 more investigations were completed for Family Allowance regional offices either by provincial government welfare departments or by other agencies. Such investigations are performed on a paid basis at a rate of \$5 per completed case report.

*Administration.*—During the year the regular conference of Regional Directors of Family Allowances was held in Ottawa. Such annual conferences are held to discuss mutual problems in administration. Policy and procedures are thoroughly reviewed and the discussion makes for improvement in administration, and for uniformity in interpretation and application of policy.

Senior administrative officers in Family Allowances visited the various Regional Offices. In addition, the Director for the Northwest Territories and Yukon had the opportunity in the autumn of 1949 to make an extended trip to the Yukon where he met with numerous public officials and others interested in various aspects of Family Allowances in that area. It is believed that such visits help greatly in mutual understanding of Family Allowances as they affect areas such as the Yukon.

During the fiscal year the National Director of Family Allowances served on two separate occasions for the Department of External Affairs as alternate Canadian representative to the Social Commission of the United Nations. This type of experience is of considerable value in providing wider horizons of international character in the understanding and appreciation of welfare matters. Close association and exchange of experience with representatives of many other countries similarly engaged in various types of welfare administration is most useful.

During the year numerous persons interested in Family Allowances visited the office at Ottawa and some of the regional offices. Included were social welfare personnel, government officials, either from Ottawa or from provincial governments, and some from outside Canada. Among the latter was Mrs. Virginia de Guia, Vice-Mayor of Baguio City, Philippines.

*Types of Reports.*—The Regional Family Allowances offices made considerable effort during 1949-50 in improving the types of report received on employment of persons under sixteen years of age, which persons are ineligible for Family Allowances. The breadth of these reports and the speed with which they are received determines the size of overpayments arising from this cause. The Unemployment Insurance Commission had improved the very useful service they had previously given to Family Allowance regional offices in this field. Questionnaires addressed to parents of children in the ages likely to be affected by juvenile employment have also proved highly effective. In consequence, many overpayments have been limited or even prevented.

Continuing efforts have been made in the matter of school attendance. Provincial departments of Education have co-operated in supplying reports of



Family Allowances continued to assure adequate food and other necessities for the growing generation.

improper absence of children, and the methods by which these reports have been made to Family Allowances regional offices have been improved in a number of provinces. Here, too, the result has been to lessen appreciably improper absenteeism and to prevent sizeable overpayments from occurring. In Newfoundland particularly the effect of Family Allowances upon school attendance has been noteworthy. There is still opportunity in some provinces, however, to get more complete reports on improper absences from school, and particularly to speed these reports so that prompt action can be taken. Undoubtedly, Family Allowances can provide a most effective means to ensure good school attendance. The administration of Family Allowances is completely dependent on provincial action in this regard, since school attendance, like education generally, is a matter of provincial jurisdiction.

### Overpayments

The subject of overpayments is considered of sufficient importance to treat somewhat extensively. As of March 31, 1950, overpayments outstanding amounted to \$451,174.78. This covers the entire period, July 1, 1945, to March 31, 1950. It should be observed that the recovery of overpayments necessarily shows some time lag after the setting up of such overpayments. Therefore recoveries in any one fiscal year are not wholly identified with the overpayments set up in that year. In other words, a certain proportion of recoveries relate to overpayments set up in earlier years. For example, in the fiscal year ended March 31, 1950, the total overpayments discovered and set up amounted to \$611,335.06 (these overpayments while determined in the last fiscal year may have occurred during any one of the fiscal years since Family Allowances began). Collections (in the year ended March 31, 1950) amounted to \$579,555.23.

An analysis of the reasons for overpayments would seem in order. A table attached (Table 17) gives a breakdown of the overpayments set up in 1949-50, classified under ten headings and showing the number of accounts affected and the amount of money involved in each classification. Further, percentages are given to indicate the relative importance of each one of the causes for overpayments. It will be observed that in frequency the three chief causes for overpayments have been (a) *working for wages*, (b) *improper absence from school*, and (c) *non-maintenance by the parent*. In amounts of money involved the three most important classes are (a) *non-maintenance*, (b) *working for wages*, and (c) *birth date errors*. (This cause of overpayments has been almost completely eliminated so far as current births, and births during the last three years, are concerned, as this report shows later.) Non-school attendance here is fourth in importance.

The right to Family Allowances depends upon the child's continuing eligibility. Unless the Family Allowances administration knows of the ineligibility immediately, the child will continue in pay and there is an overpayment in consequence. The problem becomes one of getting the earliest possible notification of ineligibility from parents, employers, school officials, welfare agencies, or any others in a position to know of such ineligibility. If ineligibility can be anticipated, so much the better, because proper advance action can then be taken to avoid an overpayment.

Removal from Canada, working for wages, and even non-maintenance by the parent, could in some cases be anticipated. School absenteeism is more difficult and certainly such an event as the death of the child could not be anticipated. Efforts must be continually made to secure from parents (whose immediate responsibility is involved) and others concerned, the speediest possible notice of ineligibility already in being, and whenever possible in advance. Continual provision of information to parents regarding their

responsibilities in this matter is the prime requirement. That parents generally have a good understanding of the factors causing ineligibility of children and that they do co-operate in giving early notification is seen from the fact that accounts subject to overpayment in 1949-50 constituted less than 1 per cent of all the Family Allowances accounts in pay. Or, put in terms of money paid, overpayments set up in the fiscal year, \$611,000, amount to about  $\frac{1}{3}$  of 1 per cent of Family Allowances paid in the year.

### *Most Recoverable*

It should also be pointed out that of the amount outstanding in overpayments at the end of March, 1950, more than 90 per cent is recoverable: 35 per cent, that is \$156,983.29, is *recoverable* automatically from active Family Allowances accounts; it is anticipated that 55.5 per cent, or \$250,326.16 more, is in large part *recoverable* from parents, even though their Family Allowances accounts have terminated. It is felt that the remainder, that is 9.5 per cent of the total, or \$42,863.33, should be considered *uncollectable*.

An analysis of the \$42,863.33 considered uncollectable at the end of the fiscal year will be of value. This balance is made up of an accumulation of amounts which may have been paid in any one of the fiscal years since July 1, 1945, when Family Allowances started. It is found that 68.4 per cent of the total consists of payments made in the fiscal years 1945-46 (Family Allowances were paid in the last nine months only of that fiscal year), and in 1946-47. The balance, that is 31.6 per cent of the overpayments now considered uncollectable, consists of payments in the last three full fiscal years with the amount for 1949-50 being only \$335. It is apparent, therefore, that the principal causes for overpayments now considered uncollectable were factors more prevalent in the earlier years of Family Allowance payments and much less prevalent in the later years.

One of the principal causes of earlier overpayments was the unavailability of provincial birth records for birth verification requirements in the first years of Family Allowances. With the present system of ready availability of birth records, almost no overpayments occur now through birth date errors. Another factor, and probably the principal one for the greater number of overpayments arising during earlier years and which overpayments are now considered uncollectable, was the lack of knowledge on the part of parents regarding their rights and responsibilities in respect to Family Allowances. For example, a sizeable amount of overpayments arose through duplicate payments. Parents who had been separated some times applied (in two registrations) for the same children. Duplicate accounts in some cases were created and overpayments resulted. That sort of overpayment can scarcely arise today.

### *Factors Involved*

Certain factors will cause the total overpayment balance to lessen. Among these it is indicated that there will be less absenteeism from school and a more rapid notification regarding absenteeism: a greater knowledge that children who work for wages cannot be paid Family Allowances and a more rapid method of getting information to Family Allowances offices when children under sixteen do engage in employment; quicker notice of non-maintenance and other causes of ineligibility such as the death of a child or its departure from Canada. All these factors which will lessen the total of overpayments are dependent ultimately on the broadest possible public information, with resulting prompt action by parents in giving notification regarding changes in eligibility of their children.

On the other hand, certain factors will tend to cause the total of overpayments to increase, at least for some time and in certain areas. For example, the arrangements made to date for notification on school absenteeism and

employment of juveniles is not as thorough and effective in some provinces as it will become. As its effectiveness increases the first tendency is to drive up overpayments. As these overpayments are created and recovery action is taken so that the parents become more aware of the causes of overpayments, then at a later stage the frequency with which such overpayments are created will decrease.

### *Overpayments in Quebec*

The Auditor General in his report for the fiscal year ended March 31, 1949, made a number of observations regarding Family Allowances. He pointed out that of the balance of Family Allowances overpayments on March 31st, 1949, three-quarters applied to payments made in Quebec. It should be recalled that this balance of overpayments to which the Auditor General refers consists largely of payments made in the earliest years of the operation of the Family Allowances Act. The large proportion of Family Allowances overpayments in Quebec is of course mainly due to the delay in obtaining provincial birth records in that province. This difficulty has now been overcome. As birth verification in Quebec has approached its final stages, and as it has become possible to check every claimed birth date back to the earliest applications made in 1945, errors that could not have been discovered earlier have been found. Oftentimes overpayments, some fairly sizeable in amount, have had to be set up. This difficult and painstaking task of final checking of a relatively small balance of Quebec birth dates still not finally proven, is now almost complete.

Another reason obtains, however, for the high proportion of overpayments in Quebec in relation to the other provinces. This is the matter of juvenile employment. Its effects will be seen even after the last results of delayed birth verification have passed. Juvenile employment in Quebec, related as it is to the early school leaving age (14 years), causes a very large proportion of the overpayments. Many juveniles between fourteen and sixteen years of age, who in other provinces would still be at school under compulsory school legislation, are in Quebec employed in industry. Until the fact of such employment is known to the Family Allowances office, overpayments occur. This factor helps to keep the proportion of overpayments in Quebec high in comparison with other provinces.

The Auditor General also observed that overpayments occur as a rule, either because proof of birth is not established or because children are not maintained by the applicant. Ten principal causes of overpayments are set out in Table 13 already referred to. In the frequency with which they occur it will be seen that birth date errors rank only fourth in importance, and lack of maintenance third. Two more frequent causes of overpayments are working for wages and improper absence from school. Birth date errors and non-maintenance do, however, constitute 38.7 per cent of the amount of the overpayments set up in the last fiscal year, and 38.4 per cent of the number of accounts affected by overpayments.

### *Suggested Measures*

The Auditor General suggested that safeguards might be introduced. One safeguard suggested was that proof of the birth date accompany application. Such proof would consist of a copy of the birth registration certificate, of a baptismal record, or some other documentary evidence. It will be recalled that no such proof was required or suggested at the time of original registration for Family Allowances. To require such documentation would put the parents to considerable inconvenience and to some cost. Even more important it would inevitably delay payment in Family Allowances. These are sound arguments against such a suggested requirement.

The principal reason, however, for not changing now to a system by which proof of the claimed birth date would be required to accompany an application for Family Allowances is the fact that since two years or more overpayments arising through birth date errors are almost non-existent. In other words, to change to such a system would be to apply a drastic and burdensome remedy to a case where the ailment has already passed. While it is true that in 1949-50, 1,410 accounts involving overpayments of \$104,980 (most of which is recoverable), were effected by birth date errors, these accounts had all actually been put into pay in earlier fiscal years before the present verification method had been perfected. Verification now takes place so easily and so effectively that overpayments due to birth date errors almost never occur. Overpayments from birth date errors arising in connection with cases put into pay for the first time in the two fiscal years ending March 31, 1948, and March 31, 1949, amounted to a total of \$163, all of which was recovered. It is apparent that the problem of possible overpayments, due to birth date errors regarding children registered in the last three years has been met.

### *Annual Declarations*

The other point made by the Auditor General was that in order to avoid overpayments due to non-maintenance by the applicant, parents should be required to furnish an annual declaration to the effect that the child is eligible, is being maintained by the parent, and if of school age, attending school. This would involve requiring almost 2,000,000 parents to make such a declaration each year. While the burden on any one family would not be onerous, the work resulting from the receipt of 2,000,000 extra forms in Family Allowances offices would be extremely heavy. Each such form would have to be scrutinized and only some months after the receipt of the forms would action be possible upon the last of them.

Aside from the cost involved in processing these forms there would be the very real possibility of misleading parents into relying upon such forms as their means of notification of ineligibility of their children. Presently they are required to notify the Family Allowances administration by letter when a child becomes ineligible. Such letters can be given immediate attention. If parents came to depend upon annual declarations to which immediate attention could not possibly be given, the result might be to increase overpayments rather than to limit them. This could easily make the remedy worse than the ailment.

The matter needs to be brought into clear focus. In 1949-50, out of 1,866,000 accounts in pay, only 13,723 accounts were affected by overpayments. In other words, more than 99 per cent of all Family Allowances accounts were clear of overpayments. To require an annual declaration from parents would mean a very great waste of time and work since so small a proportion of accounts are affected. Most would merely re-affirm their continued eligibility. Actually the need is to get notice of ineligibility when it occurs, or, if possible, before it is due to occur. Annual declarations at best could be useful only with respect to a very small minority of accounts and even the useful ones would advise regarding ineligibility only at the time of the declaration. The declaration would be out of date in many instances immediately it was received.

The kind of information needed from parents giving notice of current or impending ineligibility should not be submitted in annual declarations but by direct correspondence at the time of the occurrence. By and large it would appear that such notification is presently coming forward in the majority of instances and that the co-operation of parents is improving all the time. For instance, it is quite possible to cross-check loss of eligibility by comparing parents' advice with such other sources of information as school attendance

records, with employment reports, and with death lists. All these cross-checks show that notification from parents regarding ineligibility is improving steadily.

Rather than require an annual declaration, which would appear unnecessary to the vast majority of parents whose children continue at all times to be eligible for Family Allowances, which would be fairly costly, which would throw a great burden upon Family Allowances offices, and which would be of doubtful use in any case, it is believed better to direct publicity to parents so that they will continue their present co-operation and improve it in order to advise of ineligibility.

### Prosecutions under the Family Allowances Act

The Family Allowances Act provides certain penalties for any person who obtains Family Allowances fraudulently. When it appears that an offence has been committed, arrangements are made to have the R.C.M.P. investigate. If their investigation shows evidence of fraud, the Department proceeds with prosecution under Section 14 of the Act.

#### (a) Number of Cases of Prosecutions

During the year ending March 31, 1950, prosecution was considered in 46 cases. In 16 of these action was still pending as of March 31, 1950. Three cases were abandoned or withdrawn for reasons such as the poor health of the defendant. One case was postponed sine die, the accused having been placed in a mental hospital. This leaves 26 cases which were completed during the year ending March 31, 1950.

It should be noted that the date of the offence out of which the prosecution arose does not correspond with the date of completed action since prosecution is undertaken some time after the actual offence has been committed.

The word "case" as used here, refers to an individual who was prosecuted. There were four instances in which two or more people were prosecuted because of offences arising out of one Family Allowances account. Thus, the 26 persons prosecuted had to do with offences arising out of 20 Family Allowances accounts.

#### (b) Reasons for Prosecution

An analysis of the reasons for prosecution in the completed cases indicates the following:

Non-maintenance .....	13 cases
Non-existent or deceased child .....	6 cases
Duplicate accounts .....	6 cases
Non-resident of Canada.....	1 case
Total .....	26 cases

A word of explanation is in order with respect to each of the above classifications.

(i) *Non-maintenance*—One of the requirements of the Act and regulations is that a child must be maintained by a parent. If a parent applies for and accepts Family Allowances for a child whom he is not maintaining, prosecution may be undertaken.

(ii) *Non-existent or deceased child*—These are cases where parents apply for and receive allowances for a child who had never existed or who is deceased. The fraud in such an instance is obvious.

(iii) *Duplicate accounts*—It sometimes happens that a parent may apply more than once for the same child. With the present arrangements for checking the birth of a child a duplicate application is usually detected at once. However,

in the early stages of Family Allowances administration, before birth indexes were available, it was possible that payment might be made twice for the same child. A parent accepting duplicate payment of Family Allowances is subject to prosecution.

(iv) *Non-resident of Canada*.—When a child leaves Canada, allowances cease to be payable. There have been a few instances when parents left Canada but continued to have Family Allowances sent to a Canadian address and, furthermore, made arrangements to receive and cash the cheques. When this situation is discovered, prosecution follows.

(c) *Disposition of Completed Cases*

In 24 of the 26 completed prosecutions the defendant was found guilty. Two cases were dismissed. Two persons were given suspended sentence. The remaining 22 were required to pay a fine or serve a jail term. Fines ranged from \$1.00 to \$1,200.00 and jail terms ran from five days to six months. Twelve persons paid the fine, nine served a jail sentence, and the sentence has not yet been carried out for one person.

(d) *Conclusion*

There are certain conclusions which may be drawn from the experience over the past few years. First, it is significant to note the extremely small number of cases in which it is necessary to enter prosecutions for fraud when compared to the total of persons receiving Family Allowances.

Another observation is that with improved facilities for checking births and with the general public being better informed regarding Family Allowances legislation, the number of prosecutions for certain types of offences, such as for duplicate applications, should decrease. However, when a fraud under the Family Allowances Act is discovered, prosecution will follow.

## Indians and Eskimos

The number of accounts payable on behalf of Indian families reached 18,697 at the end of the fiscal year. This compares with 18,204 a year previously.

One of the chief features of the administration of Indian accounts during the past year has been the increased number of families who have been paid directly by cheque as white families are. There are several methods by which Family Allowances are paid on behalf of Indians, according to the degree of responsibility that it is considered the parents exercise. The transfer of more and more Indian families to direct payment reflects a move in the right direction.

Another aspect of the administration of Indian accounts is related to the payment of Family Allowances in Newfoundland. In the Labrador portion of Newfoundland the payment of Family Allowances to Indians is difficult to manage because of their scattered settlements, and of their ways of life. At Northwest River, in Labrador, the services of the Hudson Bay Company have been enlisted in order to pay Indians their Family Allowances and in order to control their use of the allowances. In a somewhat similar fashion the Department of Natural Resources of Newfoundland has undertaken to look after the Family Allowances accounts of a sizeable group of Indian families on the more northerly coast of Labrador.

With respect to Eskimos, reports show 1,636 families in pay March 31, 1950, as compared with 1,604 at the end of the previous year. These Eskimo families are to be found in 14 districts in the Western Arctic and in 12 districts in the Eastern Arctic. The administration of the Northwest Territories

has carried out surveys with regard to Family Allowances and their effect upon Eskimo families. The Deputy Commissioner states that in general Family Allowances are being used in a satisfactory manner. He quotes a report from a District Registrar as follows: "I was much impressed by the healthy appearance of the Eskimo children, which possibly is the result of regular feeding and a balanced diet, now possible by having special foods available for purchase with the children's Family Allowances". Other District Registrars have similar comments. The Deputy Commissioner concludes: "Undoubtedly Family Allowances have been responsible for many changes in the economy of the Eskimo people and in their habits of living. I firmly believe that most of these changes are for the better and that it has proved of great benefit by introducing new and nutritious foods to these people."

The Deputy Commissioner's survey of the items purchased by Eskimos against their Family Allowances credits in each one of the registration districts indicates that clothing and food, particularly milk, are among the principal items of expenditure. The Eskimos are not free to purchase any item they please but must make the purchases from prescribed lists which are prepared, having in mind the basic needs of their children and particularly the purposes of the Family Allowances Act.

One of the sources of considerable concern with Eskimo Family Allowances accounts had been the rather rapid growth of the balance of credits held by the Administration of the Northwest Territories. During the earlier years of Family Allowances payments, while procedures were being developed and Eskimos were being taught how best to use Family Allowances, expenditures lagged behind payments. By March 31, 1948, there was a balance of \$507,581; by March 31, 1949, this balance was \$576,495. However, since that time the use of Family Allowances credits by Eskimos has caught up to the amount of Family Allowances being paid by the Department of National Health and Welfare to the Administration of the Northwest Territories. In consequence, by December 31, 1949, balances were \$570,767 and by March 31, 1950, had decreased to \$550,255. These balances, by the way, are those shown on the books of the Administration of the Northwest Territories at Ottawa. The actual balances held when all vouchers are received from the field will be decidedly smaller.

The Department of National Health and Welfare welcomes the co-operation shown by the Administration of the Northwest Territories in this whole field. The field administration is most difficult and the assessment of results is particularly valuable.

### **Costs of Family Allowances Administration**

A survey of the costs of the administration of the Family Allowances Act for the fiscal year indicates that it amounts to a sum somewhat in excess of \$4,000,000. Costs to Treasury were \$2,207,851.86; costs to the Department of National Health and Welfare were \$1,833,387.29. Additional costs to the Department of Public Works were approximately \$200,000. From the experience of the past fiscal years it is indicated that the total costs amount to about 1.5 per cent of the total of Family Allowances paid. This percentage is considerably less than that found in the administration of Family Allowances legislation elsewhere.

### **Co-operation**

The administration of Family Allowances owes a great deal to organizations, both public and private, which have co-operated with it in advancing the objectives of the Family Allowances Act. Government departments, in both federal and provincial fields, employers, welfare agencies, school author-

ities and many others have been most helpful. As has already been indicated in this report the degree of co-operation from parents is steadily growing and it is evident that the understanding of the legislation and of the responsibilities of parents, as well as the rights of children thereunder, are increasingly appreciated. The constant efforts made by the Chief Treasury Officer, the District Treasury Officers and their staffs, have greatly aided the administration of Family Allowances. They have borne their full share of the responsibilities entailed in this program.

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## OLD AGE PENSIONS

Marked increase in the number of persons in receipt of old age pensions, which trend began about the close of the last war, continued throughout the year, although no further changes were made in the requirements which applicants must fulfil following the amendments to the Old Age Pensions Act in 1947.

At March 31, 1950, there were 282,584 persons in receipt of old age pensions as compared with 251,865 at the close of the previous fiscal year. Part of the increase of more than 30,000 pensioners was due to the entry of the Yukon Territory into the scheme and to the union of Newfoundland with Canada early in 1949. At March 31, 1950, there were 10,296 old age pensioners in Newfoundland and 108 in the Yukon Territory. The balance of the increase was in the other provinces and in the Northwest Territories.

### Federal Expenditure

The increase in federal expenditure was relatively much greater, due to amendments to the Act in 1949 which authorized the Government of Canada to pay 75 per centum of an amount of pension granted under the Act up to \$40 a month. Prior to these amendments, the federal contribution had been limited to 75 per centum of \$30 a month.

Increase in the maximum pension payable, along with the very substantial increase in the total number of pensioners, resulted in federal expenditure for old age pensions rising from \$64,232,210.92 for the fiscal year 1948-49 to \$89,652,203.32 for the fiscal year 1949-50. This represents by far the largest increase in federal expenditure, as between two fiscal years, since the inception of the Act in 1927.

### Pensions for Blind Persons

There were no changes in the requirements which applicants for pensions for blind persons must fulfil subsequent to the amendments to the Old Age Pensions Act in 1947. Consequently there was no unusual increase in the numbers of blind persons being granted pensions. At March 31, 1950, there were 10,517 blind pensioners as compared with 9,567 at the close of the previous fiscal year. Included in the increase were 171 pensioners in Newfoundland and two in the Yukon Territory.

As in the case of old age pensions federal expenditure rose sharply due to the amendments to the Act in 1949. Federal expenditures for pensions for the blind for the fiscal year 1949-50 was \$3,536,730.97 as compared with an expenditure of \$2,532,074.11 for the fiscal year 1948-49.

### Administration

Old age pensions and pensions for blind persons are non-contributory pensions paid subject to a means test. With the exception of persons residing in the Northwest Territories all applicants for pensions must apply to the

pension authorities appointed by the provincial governments or, in the Yukon Territory, by the Government of the Yukon Territory. Federal supervision of the administration continued to be carried on by an audit of the provincial accounts and an examination of the decisions of the various pension authorities, the latter duty being performed in the provinces.

### **Parliamentary Committee on Old Age Security**

On February 16, 1950, the Minister of National Health and Welfare gave notice of a motion to appoint a Joint Committee of the Senate and the House of Commons on Old Age Security. The Motion was debated in the House on March 10 and March 24 and agreed to on March 30. It was debated in the Senate on March 31 and agreed to the same date. The Committee had not commenced its hearings before close of the fiscal year.

Under the terms of the motion the Committee was to examine and study: the operation and effects of existing legislation of the parliament of Canada and of the several provincial legislatures with respect to old age security; similar legislation in other countries; possible alternative measures of old age security for Canada, with or without a means test for beneficiaries, including plans based on contributory insurance principles; the probable cost thereof and possible methods of providing therefor, and the constitutional and financial adjustments, if any, required for the effective operations of such plans, and other related matters.

Tables 26, 27, 28 and 29, pages 138 and 139, show the amounts paid by the Government of Canada to the Provinces for Old Age Pensions and Pensions for Blind Persons, for the fiscal year 1949-50, with relevant statistics as at March 31, 1950.

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## **PHYSICAL FITNESS**

Growing demand and enthusiasm all over Canada for more and wider programs of recreation and fitness was reflected in increasing activity of the Physical Fitness Division and of the National Council on Physical Fitness.

Shortages of trained leaders and lack of adequate facilities were still apparent and most of the provinces found it difficult to meet demands upon them, in these fields, with limited funds available. However, many useful projects were carried out and plans were made for further development of this phase of national well-being.

In 1949, the sum of \$7,000 was provided to Newfoundland, being added to \$225,000 provided under terms of the National Physical Fitness Act, 1943, which, divided among the co-operating provinces on a per capita basis, assists them in the promotion of fitness in all its aspects.

The Province of Ontario signed an agreement of participation with the federal government under terms of the Act, in April. British Columbia, Alberta, Saskatchewan, Manitoba, New Brunswick, Nova Scotia, Prince Edward Island and the Northwest Territories already were co-operating in the national fitness plan.

On appointment as National Director of Physical Fitness, in October, Mr. Ernest Lee, formerly Director of Physical Education and Recreation, Department of Education, British Columbia, became Chairman of the National Council on Physical Fitness.

### **Physical Fitness Division**

While not operating an activity program as such, the Physical Fitness Division served as a clearing house to disseminate among the provinces the latest information on physical fitness, recreation, physical education, community centres, drama, sports and allied activities.

Close liaison in these fields was developed and maintained with other countries of the Commonwealth and with foreign countries, facilitating an exchange of publications and information on the latest developments.

In July and August the Assistant Director visited England, Scotland, the Scandinavian countries and France, and represented Canada at the Lingiad and the World Congress for Physical Culture in Stockholm, and at the International Congress for Physical Education for Girls and Women in Copenhagen.

Following his appointment, the Director visited the four Maritime provinces, where he found an ambitious building project, combining school and community centres, in evidence. The Director attended a workshop on post-graduate studies in Health, Physical Education and Recreation at Pere Marquette, Illinois. Standards were established, at that time, for universities offering post-graduate courses in these three fields.

The division was represented, also, at the following conferences: The Parks and Recreation Association of Canada; the British Empire Games Association; the Canadian Olympic Association; the Amateur Athletic Union of Canada; the Montreal Parks and Playgrounds Association; the Sportsman's Shows, in Montreal and in Toronto; the Canadian Camping Association; the Recreation Division of the Canadian Welfare Council; the Junior Drama Festival, in Saskatoon, and the American Association for Health, Physical Education and Recreation.

### Information Materials

Information relevant to fitness, recreation, physical education, cultural activities, community centres, reports on new projects and research in Canada and other countries, new procedures and developments, etc., were issued in bulletin form to members of the National Council on Physical Fitness and to interested individuals and organizations.

More than 42,000 pieces of printed material were sent out, as well as a great volume of mimeographed bulletins. The division's publications, *Better Health through Skiing*, *Daily Does It*, *Guide for Leaders in Community Recreation*, and *National Aquatic Standards for Canada*, continued in great demand, and numerous applications were received for the *Fit for Tomorrow* supplement to the department magazine *Canada's Health and Welfare*.

Arrangements were made for publication of *Information on the Use of the Wetzell Grid*, in both English and French, and the division produced and distributed more than 3,000 copies of *Here's How to Do it*, which was also in demand.

Subjects covered in the duplicated material issued included, *Aid to Club Treasurers*, *Better Stages in Community Centres and Schools*, *Equipment for Outdoor Play*, *Olympic Rules*, *Pre-School Play Areas*, *Proceedings of the Second Conference of Sports Governing Bodies*, *Putting on a Play*, *Report of the Amateur Status Committee*, *Report of the Constitution Committee*, *Selected Bibliography* and *Sports and Athletics in Other Countries*.

A special camping exhibit was erected at the Canadian Camping Association's annual conference at Ottawa and a new bilingual display, showing the inter-relationship of local, provincial and federal services and the affiliation of individuals and clubs and local associations, drew favourable comment at the Sportsman's Shows in Toronto and Montreal.

A filmstrip *Simplified Staging* was produced for the division by the National Film Board. A filmstrip is being produced on *Lighting*. The division previewed 80 films and purchased 24 films and 35 filmstrips for its pre-view film library. This material is detailed in the catalogue *Here's How to Do It*, which was widely distributed both in Canada and abroad.

### National Council on Physical Fitness

The National Council on Physical Fitness, appointed to act as an advisory body to the Minister to promote the physical fitness of the people of Canada, was most active.

Meetings were held in Toronto, in April, and in Ottawa in October. The April meeting was scheduled in such a way as to share part of its program with the Dominion Drama Festival. Special sessions were held on Children's Theatre programs and the place of drama in recreation.

Following the pattern established last year, a second meeting was held under auspices of the Council of representatives of all National Sports Governing bodies, when reports were presented on the constitution, amateur status, participation of school students in outside sports, railway rates, etc. Committees were set up at this conference to study the question of imported equipment and customs duties, and to consider recommendation to the government of an inquiry, possibly in the form of a Royal Commission, into sports, athletics and games in Canada.

In an attempt to solve the problem of shortages of trained leaders for small towns and rural areas, a committee was set up to study the question of regional leader-training schools. A proposed one-year recreation diploma course was recommended.

On the recommendation of the National Council, scholarships for post-graduate studies in the field of Physical Fitness and Recreation were awarded this year to Mr. M. L. Van Vliet, University of Alberta; Mr. H. D. Whittle, University of British Columbia; Mr. Roger Dion, University of Ottawa; Miss Louise Dumais, Laval University, and Mr. F. R. Kennedy, University of Manitoba. They will be obliged to go abroad since no such courses are available in Canada. The Council also recommended similar scholarship awards next year.

In co-operation with the Canadian Association of Mayors and Municipalities and the Parks and Recreation Association, the National Council began a recreation survey on a national scale, and dealing with the administration of recreation, finances, programs, capital expenditures, etc. Questionnaires were sent out to all cities of 100,000 or more residents, to a selected group of smaller cities and towns and to representative rural areas.

During the year the Council received briefs from the following organizations: the Parks and Recreation Association; Canadian Amateur Ski Association; Canadian Arts Council; Canadian Youth Hostels Association; Pan American Congress; Federation of International Youth Gymnastic Ling, and the Sports College of the Air.

The Council recommended to the Minister of National Health and Welfare that funds be provided under the Mental Health and Professional Training Grants in the National Health Program for the training of recreational therapists, the payment of salaries to such persons and for the provision of needed recreation equipment to carry out their programs.

The amount of assistance provided to provinces, and provincial expenditures, under the National Physical Fitness Act, during 1949-50, are shown in Table 30, page 140.

# ADMINISTRATION BRANCH

## ADMINISTRATIVE SERVICES

Development of the department's activities in many fields made increasing demands upon administrative divisions servicing establishments abroad as well as at Ottawa and other Canadian points where federal health and welfare agencies functioned.

The **Departmental Secretary's Division** maintained liaison between the department and the legislative branches of government, while serving all divisions through its Accounts and Estimates, Correspondence, Central Registry and Duplicating Sections and the Departmental Stenographic and Typing Pool.

Work of the **Legal Division** was a reflection of problems arising from the fulfilment of the department's statutory obligations and from their interpretation through Regulations and procedures covering all phases of health and welfare.

Accommodation, staff and equipment requirements of expanding services kept the **Personnel, Purchasing and Supply Divisions** busy during the year.

The **Departmental Library** provided valuable reference information, through its collections of books, serial publications, pamphlets and government documents, at the main library and at branches in the Food and Drug Divisions and the Laboratory of Hygiene.

Staff of the Department, at March 31, 1950, totalled 2,789, of whom 773 were permanent.

## INFORMATION SERVICES

With growing public interest in its work and generous co-operation from other government and voluntary agencies, the Information Services Division expanded its activities and coverage during the year and employed every means of providing Canadians with sound health and welfare knowledge.

Audio-visual media were more widely used than previously, the division producing films, filmstrips, displays and radio programs to show Canadians how to help in raising national health and welfare standards.

Major projects included participation with United States authorities and the National Film Board of Canada in producing a film on cancer, preparation of radio plays, public relations work concerning celebration of the 75th anniversary of Canada's first food and drug laws and presentation of displays at exhibitions.

Thousands of copies of books and folders were reprinted, new publications and posters were produced, departmental periodicals were improved and services were extended through the press, the radio, the forum, educational and other public bodies and societies to meet increasing demand for health and welfare information.

### Press

Newspaper readers in Canada as well as abroad were kept advised on departmental activities and plans through the release of announcements concerning health and welfare measures and special stories prepared on request.

Developments arising from allotment of funds under the National Health Program accounted for the great majority of press releases but increasing use was made of feature space in the press and numbers of picture stories were arranged.

Members of the Parliamentary Press Gallery and of the news services were provided with factual reports and given facilities for spot news coverage.

The features *Here's Health*, a weekly mat service of cartoons and verse, *Canada's Health*, proofed columns of notes and *Press Fillers*, sets of briefs, continued to be popular with editors, additional house organs, magazines and even daily newspapers asking for these services.

## Radio

Launched last year, a series of radio plays entitled *Here's Health* made remarkable progress, being heard regularly over 102 stations—the majority of Canada's independent radio outlets. These bright health stories were produced by professional radio groups in Montreal and Toronto and supplied to stations on discs. Subjects of 48 such plays produced this year ranged from the saga of a northland nurse to the work of a food and drug scientist.

*National Health Notes* supplied to all radio stations since 1938 continued to be used widely. The division also co-operated with such radio programs as the C.B.C.'s *International Network*, *Science Reporter*, *This Week*, *Radio Farm Forum* and *Monday Magazine*.

Possibilities of television, when available as an informational medium, were studied.

## Periodicals

Health and welfare articles which aroused interest were published in *Canada's Health and Welfare*, provided monthly to more than 80,000 readers. Coloured bi-monthly magazine supplements were issued dealing with *Pure Food-Safe Drugs*, *Nursing*, *Community Chests*, *Dental Health*, *Mothers' Allowances* and *Indian and Eskimo Health*.

The division continued to edit the monthly *Industrial Health Bulletin*, and, also for the Industrial Health Division, produced two editions of the *Industrial Health Review*. Editorial assistance was given to the Nutrition Division on the monthly *Canadian Nutrition Notes* and the annual *Nutrition Bulletin* of the Canadian Council of Nutrition, as well as to the Food and Drug Divisions in issuing the bi-monthly *Food and Drug News*.

A mimeographed weekly news-letter *For Your Information* kept the health education field advised on projects and served as a clearing-house of news and views.

## Publications

A colourful book *You and Your Family* was produced for distribution, on request, to recipients of Family Allowances.

To mark the 75th anniversary of the first Canadian food and drug laws, the division published *Canada Pioneers in Food and Drug Control* and an extended history of the Food and Drug Divisions.

Produced in collaboration with the Mental Health Division, *The Backward Child*, dealing with home care and training of the mentally-retarded child, proved very popular. The Child Training series for the same division was enlarged, new folders being published on *Stuttering* and *Shyness*. Also for the Mental Health Division a new series was begun on *The School-Age Child*, the first to be *Preparing the Child for School*.

First of the series on child upbringing *Up The Years From One to Six* was near completion. This book follows the very successful *Canadian Mother and Child*, the Child and Maternal Health Division's book on prenatal and postnatal care and maternity.

Other publications initiated, revised or reprinted are detailed in reports of divisions concerned. Arrangements were made to print calendars for a sickness survey by federal and provincial authorities. A new series of Indian Health calendars was prepared. The division again edited the department's Annual Report. For the Canadian Nurses Association the division published *What You Want to Know about Nursing*, and a Study Guide kit was prepared for the Canadian Association of Home and School.

Departmental publications are listed and described in *Words to the Wise*, catalogue of health education material, obtainable on request from the Information Services Division.

## Films and Filmstrips

Biggest film project of the year was *Challenge: Science Against Cancer*. With costs borne jointly by this department, the National Cancer Institute of the United States Public Health Service and the National Film Board of Canada, this film evoked plaudits of critics at its world premiere in New York and Canadian premiere in Ottawa.

While production was by the Canadian government film agency, technical advice was drawn from government and non-government sources on both sides of the border, among them the Medical Film Institute of the Association of American Medical Colleges and the National Cancer Institute of Canada. This marked the first occasion when a project of this nature was sponsored jointly by Canadian and U. S. governments. Plans were made for world-wide theatrical release of the film and for a filmstrip for use in schools and colleges.

Two films sponsored by the department and produced by the National Film Board were winners in the Canadian Film Awards. They were *The Feeling of Hostility* and *Drug Addict*.

Three additional films produced for the department provided a total of 32 pictures covering a wide range of subjects.

Departmental films seen in Canadian theatres included *White Fortress*, dealing with the National Health Program, and *What's Under the Label?* The latter dealt with food and drug control. *The Unadulterated Truth*, a longer non-theatrical version of *What's Under the Label?* was made for special audiences. Theatrical news-clips produced included endorsements of *Immunization* and *National Health Week*.

Production continued on the second film in the *Ages and Stages* series, *The Terrible Twos* and *the Trusting Threes*. A fourth film in the *Mental Mechanisms* series, tentatively titled *The Feeling of Guilt*, was initiated for the Mental Health Division.

The film *Teeth are to Keep* was completed. Filmstrips finished included *Brush Up on Your Teeth*, *Ten Little People and Their Teeth*, *Your Health and the Corner Store*, *Pure Food-Safe Drugs* and the *Wetzel Grid*, for the teaching profession. Another strip was being made on the *Wetzel Grid* for the medical profession and filmstrips in production, in addition to that on *Cancer*, included four on restaurant sanitation entitled *Meals for Millions*, as well as *The Case History of Emily* and *A Good Breakfast* (Nutrition) *Teen-Age Teeth* and *A Toothsome Tale* (Dental) and *Simplified Staging* (Recreation).

To handle expanding work in these fields a film and filmstrip liaison officer was loaned to the division from the National Film Board.

The department's screen productions are described in the catalogue *Let's See*, obtainable on request from Information Services Division.

## Exhibits

At the Canadian National Exhibition, Toronto, in August, a 35-foot exhibit dealt with Canada's health and welfare services, particularly with the National

Health Program, health education and food and drug control. An estimated 500,000 people saw this display, which was staffed by information officers and scientists from the Ottawa and Toronto food and drug laboratories.

The department also exhibited at the Canadian Federation of Home and School, Vancouver, in May; the Canadian Welfare Council's Montreal convention, the National Conference on Social Work at Cleveland, Ohio, and the Canadian Dental Association in Saskatoon, all in June; the Central Canada Exhibition, Ottawa, and the Maritime Dental Association meeting, St. Andrew's N.B., in August; the Ontario Community Welfare Council meeting, Toronto, in September; annual conventions of the American Public Health Association, New York, American Hospital Association, Cleveland, Canadian Institute of Sanitary Inspectors, Ottawa, and the Eastern Ontario Dental Association, Peterborough, all in October, at a health festival held by the Junior Chamber of Commerce at Sherbrooke, Que., and Dental Health Day, Ottawa, in February; the Montreal Sportsman's Show and the Canadian National Sportsman's Show, Toronto, both in March.

### Posters

Three new posters dealing with *Flies*, protection of *Drinking Water* and *Common Drinking Cups* were produced for the Public Health Engineering Division.

Posters employing humorous cartoon technique were produced on *General Health*, *Balanced Diet*, *Recreation*, *Clean Plant*, *Skin Care* and *How are You?* for the Industrial Health Division. A poster on *Moving* was produced for information of Family Allowances recipients.

### Biological Photography

Value of the Biological Photographic Laboratory in the establishment of the division was demonstrated frequently when pictures were required on scientific subjects. Important photographic records not obtainable elsewhere were thus secured for professional and informational use.

Work of the biological photographers won international recognition, one print being selected by the Professional Photographers' Association of America for its permanent loan collection.

### Distribution

With the great turnover of departmental literature larger quarters were obtained for the Distribution Section. More than 2,500,000 pieces of informational material were shipped to provincial, municipal and other agencies assisting in distributing it. Departmental periodicals sent by direct request represented another 2,500,000 pieces. Arrangements were made with the Department of Public Printing and Stationery to handle numerous applications from abroad for the department's literature.

### Miscellaneous

Arrangements for public and press participation were made in connection with "open house" observances marking the 75th anniversary of the first Canadian food and drug legislation.

The division co-operated with the National Film Board and with United States authorities in staging elaborate premieres of the Cancer film in New York and Ottawa and public relations arrangements were made for first showings in provincial capitals and other cities.

Addresses and radio talks were given by members of the division and departmental officials were assisted in preparation of material for speeches.

radio broadcast and publication. The Director of Information Services lectured on Public Relations at Carleton College and Toronto University. For the second year, a public health class at Ottawa University was given lectures during the winter and the division co-operated with the Departmental Secretary and the Secretary of the Dominion Council of Health in visits to the department by nurses from McGill University, Montreal, and Carleton County, Ont.. Health Unit.

Stamp meter slogans were arranged for use on envelopes carrying Family Allowances cheques.

Large numbers of people visited the division during the year in search of specific information and there was a large volume of correspondence (more than 100,000 letters) with enquiries from all over Canada and abroad.

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## RESEARCH DIVISION

During the year the Research Division carried out a number of major research and developmental projects in addition to the provision of routine research services for officials of the department, and for other government and voluntary agencies as well as for international bodies.

The division carried on a number of projects to assist the provincial health surveys being made under the federal Health Survey Grant. Comprehensive uniform reporting forms were drawn up to be used in the provincial health surveys to ensure that basic data on the health services, facilities and personnel in all provinces would be collected on a uniform basis. Research assistance was made available to the Newfoundland Public Health Department in carrying out some aspects of their health survey; in this connection the division prepared background data for the use of that department in its health survey report. Detailed information was supplied to a number of provinces concerning the number and location of physicians, for use in the health surveys, and a number of special projects were carried out to assist them in other aspects of survey work. Assistance was also given to the Health Insurance Studies Division in connection with other projects under the National Health Grant Program.

### Parliamentary Committee

For several months the services of the division were placed at the disposal of the Joint Committee of the Senate and the House of Commons on Old Age Security. The Director of the division was appointed Research Adviser to the Committee and on a number of occasions testified before it. At the request of the Committee the division prepared comprehensive reports on old age income security programs in eight countries and in response to requests by the Committee during its hearings supplied a considerable amount of documentation on various aspects of old age security in Canada and abroad. Under the direction of the Committee the division prepared a draft summary of the evidence for the factual part of the Committee's report to Parliament.

### Rehabilitation

In the course of the year the division initiated a program of research in the field of rehabilitation of the disabled, including the related subject of disability pensions, and a research assistant was assigned to this work on a full-time basis. Conferences were held in Washington with officials of the United States Office of Vocational Rehabilitation concerning the operation of the American federal-state rehabilitation program and the programs of the Woodrow Wilson Rehabilitation Centre in Virginia, and of the Institute for Crippled and Disabled and the Rehabilitation Department of Bellevue Hospital

in New York were studied. With the Chief of the Industrial Health Division the Director of the Research Division represented the department on the Interdepartmental Committee on Rehabilitation set up for the purpose of planning a National Conference on Rehabilitation of Disabled Persons. At the request of this Committee, the division was responsible for the preparation of a reference book discussing the rehabilitation process and containing background data on existing rehabilitation services in Canada, the United States and the United Kingdom. In the preparation of some of this material, assistance was received from Mrs. R. W. Summey, Rehabilitation Consultant for the Montreal Council of Social Agencies.

### Other Services

During the year a number of comprehensive reports were prepared for the United Nations and its specialized agencies, dealing with different aspects of social welfare work in Canada and including detailed studies on child and youth welfare services, marriage and divorce, traffic in women and children, family assistance and youth guidance. Reporting of changes in federal and provincial health legislation for the World Health Organization was continued, and a number of reports, including monographs on Income Maintenance and on Medical Care in Canada, were prepared for the International Labour Organization.

The division assisted the Industrial Health Division in the conduct of industrial health surveys in Newfoundland and New Brunswick and technical assistance was also provided the Dental Health and Nutrition Divisions in surveys related to their work. The division provided a considerable amount of staff time in the preparation of forms to be used in the National Sickness Survey.

Sections of the Canada Year Book and of other official publications dealing with health, welfare and social security subjects were also prepared by the division, together with a number of articles for publication, including the "Global Report" contained in each monthly issue of the departmental publication, *Canada's Health and Welfare*, and the annual report, *Survey of Physicians in Canada*.

### Bulletins

Publication of two series of bulletins dealing with different phases of health and welfare was also begun during the year. A number of bulletins were issued in the Social Security Series and these included: *Mothers' Allowances Legislation in Canada*, a review of Mothers' Allowances legislation in all provinces, and several bulletins dealing with old age security programs in Australia, New Zealand, Denmark, the United States, Great Britain, France and Switzerland. The first study to be issued under a General Series was entitled *Survey of Dentists, 1949*. A report of the Supply of Nurses in Canada was prepared at the request of, and presented to the Dominion Council of Health at its 57th meeting, and a report on Health Facilities in the Northwest Territories was prepared in co-operation with the Directorate of Indian Health Services.

### Health Insurance

Health insurance research was expanded during the year. A Health Insurance Research unit was established to meet the increasing demands made on the division for research in this field. The division took an active part in the work of two sub-committees of the Interdepartmental Committee on Social Security, the working committee on Health Insurance and the working committee on Old Age Pensions.

With the employment in the latter part of the year of a Research Assistant on a full-time basis for budget study analyses, the division extended its activities in the area of family income and expenditure studies, particularly in relation to Family Allowances, Old Age Pensions, recreational and Health Insurance programs.

During the year the division was represented on, and contributed to the work of, a number of other committees, such as the Interdepartmental Committee on Maritime Development, the Canadian Association of Administrators of Labour Legislation, the Interdepartmental Committee on Accident Statistics, the Interdepartmental Committee on Family Allowances Statistics, the Interdepartmental Committee on Judicial Statistics and the Medical Advisory Committee to the Dominion Statistician. The Director of the division also served as a member of the steering committee of the Social Work Research Group, of the Conference of Social Work in the United States, an organization devoted to the study of social welfare research, and on the Research Committee of the Canadian Welfare Council and a number of other organizations concerned with different aspects of social welfare. In co-operation with the Personnel Committee of the Canadian Welfare Council, the division developed plans for a Survey of Social Workers in Canada.

As in other years, a number of persons studying on international fellowships, and officials of provincial governments and other organizations, spent some time with the division. Particularly valuable assistance was received from Miss Elva Will, Research Assistant in the Department of Social Services, Australia, who spent three months on the staff of the division before proceeding to the United States on a United Nations' fellowship.

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TABLE 1  
(Child and Maternal Health Division)  
BIRTHS, DEATHS AND MARRIAGES IN CANADA, 1926-1948.

Year	Live Births		Stillbirths		Total deaths		Maternal Deaths		Deaths under One Year		Deaths under One Month		Marriages	
	Number	Rate per 1000 Pop.	Number	Rate 1000 Live Births	Number	Rate per 1000 Pop.	Number	Rate 1000 Live Births	Number	Rate 1000 Live Births	Number	Rate 1000 Live Births	Number	Rate per 1000 Pop.
1926.....	232,750	24.7	7,105	30.5	107,454	11.4	1,317	5.7	23,692	102	11,091	48	66,658	7.1
1927.....	234,188	24.3	7,336	31.3	105,292	10.9	1,300	5.6	22,010	94	10,532	45	69,515	7.2
1928.....	236,757	24.1	7,577	32.0	109,057	11.1	1,331	5.6	21,195	90	10,349	44	74,311	7.6
1929.....	235,415	23.5	7,566	32.1	113,515	11.3	1,341	5.7	21,574	92	10,430	44	77,288	7.7
1930.....	243,495	23.9	7,707	31.7	109,306	10.7	1,405	5.8	21,742	89	10,247	42	71,657	7.0
1931.....	240,473	23.2	7,619	31.7	104,517	10.1	1,215	5.1	20,360	85	9,897	41	66,591	6.4
1932.....	235,666	22.5	7,284	30.9	104,377	9.9	1,181	5.0	17,263	73	8,845	38	62,531	6.0
1933.....	222,868	20.9	6,848	30.7	101,968	9.6	1,111	5.0	16,284	73	8,271	37	63,865	6.0
1934.....	221,303	20.5	6,452	29.2	101,582	9.4	1,167	5.2	15,870	72	7,777	35	73,092	6.8
1935.....	221,451	20.3	6,449	29.1	105,567	9.7	1,063	4.9	15,730	66	7,747	35	76,893	7.0
1936.....	220,371	20.0	6,350	28.8	107,050	9.7	1,233	5.6	14,574	66	7,393	34	80,904	7.3
1937.....	220,235	19.8	6,275	28.5	113,824	10.2	1,071	4.9	16,693	76	7,527	34	87,800	7.9
1938.....	229,446	20.5	6,426	28.0	106,817	9.5	968	4.2	14,517	63	7,268	32	88,438	7.9
1939.....	229,468	20.3	6,365	27.7	108,951	9.6	967	4.2	13,939	61	7,038	31	103,658	9.2
1940.....	244,316	21.5	6,634	27.2	110,927	9.8	978	4.0	13,783	56	7,256	30	123,318	10.8
1941.....	255,317	22.2	6,882	27.0	114,639	10.0	901	3.5	13,236	60	7,817	31	121,842	10.6
1942.....	272,313	23.4	7,132	26.2	112,978	9.7	818	3.0	14,651	54	7,655	28	127,372	10.9
1943.....	283,580	24.0	6,801	24.6	118,635	10.1	798	2.8	15,217	54	8,384	30	110,937	9.4
1944.....	284,220	23.8	6,705	23.0	116,052	9.7	776	2.7	15,539	55	8,282	29	101,496	8.5
1945.....	288,730	23.9	6,668	23.1	113,414	9.4	660	2.3	14,823	51	8,244	29	108,029	8.9
1946.....	330,732	26.9	7,121	21.5	114,931	9.4	595	1.8	15,434	47	8,991	27	134,088	10.9
1947.....	359,094	28.6	7,461	20.8	117,725	9.4	554	1.5	16,336	45	9,507	26	127,311	10.1
1948.....	347,307	27.0	6,849	19.7	119,384	9.3	510	1.5	15,164	44	8,897	26	123,314	9.6

TABLE 2  
(Civil Service Health Division)  
HEALTH UNIT STATISTICS—By Months  
Fiscal Year 1949-50

	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Total
<b>Male</b>	6,995	7,642	7,846	6,406	7,508	9,020	8,980	9,280	9,767	10,404	10,222	11,209	105,439
<b>Female</b>	2,728	3,141	3,160	2,805	3,157	3,982	4,077	3,904	4,296	4,628	4,507	4,891	45,427
<b>Total Visits</b>	4,267	4,501	4,686	3,690	4,351	5,038	4,903	5,296	5,471	5,806	5,625	6,318	60,012
<b>NATURE OF VISITS</b>													
First Visits	5,118	5,554	5,840	4,779	5,615	6,667	6,451	6,681	6,850	7,329	6,920	7,313	75,117
Repeat Visits	1,827	2,088	2,006	1,717	1,893	2,353	2,529	2,579	2,917	3,076	3,302	3,896	30,322
Illness	2,524	2,500	2,807	2,653	2,976	3,390	3,358	3,380	3,604	4,200	4,066	4,811	40,497
Accident	748	933	950	726	790	868	889	921	1,051	987	934	869	10,675
Consultation	806	1,065	773	743	808	754	1,044	1,043	929	1,263	1,241	1,477	11,946
Return to Work Visits	2,917	3,165	3,226	2,374	2,835	4,008	3,680	3,907	4,063	4,104	3,951	4,052	42,321
Days Lost due to Casual Absence	2,906	3,204	3,085	2,206	2,628	4,302	3,848	3,933	4,204	4,166	3,984	4,069	42,965
<b>CLASSIFICATION</b>													
Respiratory	1,583	1,164	827	524	752	2,620	1,892	1,881	2,367	2,491	2,578	2,366	21,054
Digestive	653	801	1,115	992	1,214	396	871	1,011	985	971	788	1,011	11,308
Non respiratory and non digestive													
Skin and cellular	269	466	505	443	448	248	283	290	253	313	313	329	3,882
Menstrual Disorders	371	461	482	414	438	364	412	444	429	413	465	480	5,074
Emotional Disorders, Nervousness	463	115	127	92	171	112	112	123	113	93	108	127	1,276
Ill defined and All Others	1,098	2,163	1,720	1,720	2,071	1,808	2,218	2,292	1,984	2,265	2,130	2,346	24,896
<b>Non-Industrial Injuries</b>	332	464	487	399	439	378	406	397	448	555	411	428	5,113
<b>INDUSTRIAL INJURIES</b>	137	171	172	120	172	196	235	240	267	224	224	268	2,487
<b>CONTAGIOUS DISEASES</b>	11	6	5	4	2	1	1	3	4	4	8	8	57
<b>DISPOSAL</b>													
Sent Home	165	135	142	119	175	215	169	178	184	185	220	271	2,158
Returned to Work	6,830	7,307	7,704	6,377	7,333	8,807	8,811	9,082	9,583	10,368	10,002	10,938	103,281
Returned to H. C.	76	96	114	91	88	114	149	119	146	160	164	140	1,196
Referred to Family Physician	342	370	348	320	441	339	435	405	377	392	417	439	4,618
Referred to Clinic	—	46	53	52	39	45	51	45	40	51	41	328	411
Health Centre Consulted	119	119	115	102	81	136	186	138	106	139	165	132	1,378
Dept. Contacted	—	36	79	116	128	194	194	146	193	239	249	285	2,144
Bed Rest, Quiet Room	—	324	444	444	488	479	483	637	698	842	744	1,060	6,643
Home Visits	13,738	13,874	13,977	14,282	14,660	14,006	15,268	14,550	15,016	15,065	15,042	15,223	141,111
Average No. Persons under Supervision	12	12	12	13	13	14	14	11	14	14	11	11	11
No. of Health Units in Operation	12	12	12	13	13	14	14	11	14	14	11	11	11

TABLE 3  
(Civil Service Health Division)

## HEALTH CENTRE STATISTICS

Fiscal Year 1949-50

Items	Total
<b>TOTAL VISITS</b>	
Male	4,611
Female	3,124
First Visits	1,487
Repeat Visits	2,570
	2,041
<b>PHYSICAL EXAMINATIONS</b>	
Pre-Employment, Permanency, Etc.	1,010
Obligatory Exam. with Immunization	221
Voluntary	499
Other	565
<b>OTHER SERVICES</b>	
Accident Industrial	65
Accident Non-Industrial	308
Immunization	693
Consultation Interview, etc.	1,250
<b>DISPOSAL</b>	
Return to Work	4,558
Sent Home	53
Referred to Family Physician	134
<b>LABORATORY PROCEDURES</b>	
Haemoglobin Tests	412
Red Blood Counts	330
White Blood Counts	345
Differential Counts	154
Urinalyses	2,089
Venepunctures for Serology	39
Tests for Sedimentation Rates	81
Glucose Tolerance Curves	11
Estimations of Fasting Blood Sugars	8
Colour Index	66
Platelet Count	1
Clot Retraction	1
<b>X-RAY</b>	
Hand	49
Wrist	25
Elbow	17
Shoulder	18
Foot	17
Ankle	26
Knee	18
Pelvis	6
Spine—Cervical	8
Dorsal	12
Lumbar	17
Skull	1
Sinuses—Frontal	9
Jaw	2
Nose	1
Chest	831
Ribs	17
Kidney	7
Stomach	9
Chest	1,323
E.C.G.	104

TABLE 4  
(Civil Service Health Division)

RETIREMENTS FROM SERVICE—ACCORDING TO DISABILITY—  
Fiscal Year 1949-50

Male-149

Female-34

Total-183

Cause of Disability	AGE GROUPS					Total
	Under 40	40-44	45-49	50-54	55-59	
Infective and Parasitic.....	1	1	.....	1	6	9
Neoplasms.....	.....	1	4	1	1	7
Allergic, endocrine, metabolic, nutritional.....	.....	2	.....	2	4	8
Blood and Blood forming.....	.....	.....	1	.....	.....	1
Mental psychoneurotic personality.....	1	3	2	7	11	24
Nervous systems and sense organs.....	1	2	.....	5	8	16
Circulatory.....	1	2	3	21	38	64
Respiratory.....	.....	.....	2	2	8	12
Digestive.....	.....	.....	.....	2	4	6
Genito-urinary.....	1	.....	.....	1	2	4
Skin and Cellular.....	.....	.....	1	.....	.....	1
Bones and organs of movement.....	1	2	3	6	15	27
Symptoms and Ill-defined.....	1	.....	.....	.....	.....	1
Accidents and results of old injuries.....	.....	.....	.....	3	.....	3
TOTAL.....	7	12	16	51	97	183

TABLE 5  
(Family Allowances Division)

FAMILY ALLOWANCES PAYMENTS

Fiscal Year 1949-50

Province	April	May	June	July	August	September
Newfoundland.....	\$ 703,836	\$ 805,032	\$ 816,275	\$ 816,213	\$ 818,071	\$ 819,676
Prince Edward Island.....	192,294	204,523	199,267	199,806	200,919	201,871
Nova Scotia.....	1,226,273	1,287,130	1,267,865	1,268,797	1,272,132	1,273,702
New Brunswick.....	1,058,245	1,136,592	1,103,830	1,108,371	1,113,130	1,115,260
Quebec.....	7,575,108	8,185,084	7,914,429	7,947,343	7,963,280	8,000,703
Ontario.....	6,818,767	7,007,328	6,958,632	7,010,604	7,070,580	7,091,267
Manitoba.....	1,263,127	1,301,629	1,292,855	1,300,170	1,308,200	1,305,931
Saskatchewan.....	1,537,599	1,593,503	1,575,489	1,587,842	1,589,744	1,584,832
Alberta.....	1,587,337	1,633,176	1,625,681	1,641,446	1,656,105	1,662,881
British Columbia.....	1,665,796	1,696,356	1,700,206	1,718,066	1,734,692	1,728,951
Northwest Territories and Yukon.....	48,295	47,589	51,578	51,311	49,495	49,371
National.....	\$23,676,677	\$24,897,942	\$24,506,107	\$24,650,059	\$24,776,348	\$24,834,445
Newfoundland.....	\$ 827,242	\$ 820,778	\$ 827,236	\$ 828,949	\$ 833,535	\$ 835,534
Prince Edward Island.....	202,318	201,818	202,499	201,899	202,546	202,853
Nova Scotia.....	1,276,793	1,282,626	1,282,783	1,286,776	1,287,263	1,291,026
New Brunswick.....	1,118,501	1,118,844	1,123,581	1,127,572	1,129,309	1,130,338
Quebec.....	8,015,351	8,060,789	8,052,284	8,118,084	8,127,586	8,124,539
Ontario.....	7,100,465	7,133,872	7,168,296	7,194,800	7,218,728	7,252,071
Manitoba.....	1,310,461	1,311,964	1,317,268	1,319,564	1,325,092	1,328,884
Saskatchewan.....	1,880,409	1,584,948	1,581,132	1,580,987	1,582,619	1,585,299
Alberta.....	1,657,802	1,664,852	1,671,338	1,677,599	1,679,183	1,685,215
British Columbia.....	1,740,949	1,756,939	1,762,705	1,772,897	1,782,979	1,788,233
Northwest Territories and Yukon.....	50,674	52,133	51,554	50,669	54,510	51,804
National.....	\$24,880,965	\$24,980,563	\$25,040,736	\$25,159,796	\$25,223,350	\$25,275,796
						\$297,911,784

NOTE: Figures shown are gross and do not include payments subsequently cancelled or refunds received in connection with overpayments.

TABLE 6  
(Family Allowances Division)

## FAMILIES IN PAY

Fiscal Year 1949-50

Province	April	May	June	July	August	September
Newfoundland.....	45,142	47,649	49,007	49,445	49,756	49,887
Prince Edward Island.....	12,928	12,950	13,001	13,076	13,116	13,148
Nova Scotia.....	89,087	89,352	89,582	89,758	89,990	90,113
New Brunswick.....	70,720	70,964	71,150	71,459	71,643	71,744
Quebec.....	489,476	491,639	493,216	495,255	496,881	498,436
Ontario.....	577,804	579,517	581,432	584,404	587,824	589,714
Manitoba.....	102,156	102,526	102,968	103,343	103,625	103,816
Saskatchewan.....	115,173	115,452	116,006	116,391	116,490	116,469
Alberta.....	124,519	125,224	125,772	126,099	127,147	127,909
British Columbia.....	148,161	148,663	149,540	150,511	151,165	151,734
Northwest Territories and Yukon.....	3,591	3,586	3,639	3,658	3,709	3,708
NATIONAL.....	1,778,757	1,787,522	1,795,313	1,803,999	1,811,346	1,816,678
	October	November	December	January	February	March
Newfoundland.....	50,051	50,105	50,350	50,371	50,549	50,694
Prince Edward Island.....	13,182	13,167	13,177	13,174	13,163	13,165
Nova Scotia.....	90,164	90,327	90,483	90,657	90,770	91,012
New Brunswick.....	71,887	71,992	72,191	72,304	72,365	72,410
Quebec.....	498,496	501,311	502,179	504,542	507,256	507,727
Ontario.....	591,461	594,043	597,360	599,486	601,636	603,847
Manitoba.....	104,136	104,402	104,666	104,901	105,212	105,611
Saskatchewan.....	116,484	116,501	116,373	116,479	116,654	116,917
Alberta.....	128,080	128,815	129,661	129,817	130,323	130,686
British Columbia.....	152,504	153,604	154,340	155,161	155,852	156,367
Northwest Territories and Yukon.....	3,742	3,780	3,791	3,786	3,829	3,833
NATIONAL.....	1,820,187	1,828,047	1,834,571	1,840,678	1,847,609	1,852,269

TABLE 7  
(Family Allowances Division)

## AVERAGE ALLOWANCE PER FAMILY

March, 1950.

Newfoundland.....	\$16.48
Prince Edward Island.....	15.41
Nova Scotia.....	14.18
New Brunswick.....	15.61
Quebec.....	16.00
Ontario.....	12.01
Manitoba.....	12.58
Saskatchewan.....	13.56
Alberta.....	12.89
British Columbia.....	11.44
Northwest Territories and Yukon ..	13.51
NATIONAL.....	13.64

TABLE 8  
(Family Allowances Division)

## CHILDREN IN PAY

Fiscal Year 1949-50

Province	April	May	June	July	August	September
Newfoundland.....	122,402	128,542	132,678	134,338	135,296	135,762
Prince Edward Island.....	32,661	32,744	32,856	32,934	33,112	33,224
Nova Scotia.....	207,931	208,223	209,531	210,145	210,836	211,865
New Brunswick.....	182,240	183,060	183,649	184,513	185,243	185,747
Quebec.....	1,305,361	1,309,883	1,313,005	1,317,949	1,320,670	1,324,869
Ontario.....	1,144,559	1,148,770	1,153,774	1,160,221	1,166,920	1,171,531
Manitoba.....	212,346	213,225	214,229	215,511	216,557	216,539
Saskatchewan.....	258,450	258,902	259,060	260,702	261,191	260,639
Alberta.....	267,038	268,369	269,898	271,954	273,995	275,530
British Columbia.....	280,379	282,282	284,240	287,318	289,449	289,460
Northwest Territories and Yukon.....	7,815	7,771	7,902	7,917	8,077	8,003
NATIONAL	4,021,182	4,041,771	4,060,831	4,083,502	4,101,256	4,115,369
	October	November	December	January	February	March
Newfoundland.....	136,845	136,944	137,870	138,461	139,074	139,571
Prince Edward Island.....	33,318	33,311	33,384	33,376	33,489	33,588
Nova Scotia.....	211,572	212,139	212,653	212,927	213,411	213,981
New Brunswick.....	186,229	186,576	187,309	187,815	188,261	188,593
Quebec.....	1,323,703	1,330,862	1,334,330	1,341,046	1,346,518	1,350,588
Ontario.....	1,176,056	1,181,688	1,188,150	1,193,469	1,198,968	1,204,558
Manitoba.....	217,283	217,845	218,566	219,205	220,034	220,862
Saskatchewan.....	260,291	260,584	260,428	260,717	261,061	261,623
Alberta.....	274,551	276,668	277,973	278,693	279,859	280,780
British Columbia.....	291,345	293,706	294,978	296,727	298,388	299,833
Northwest Territories and Yukon.....	8,078	8,183	8,237	8,220	8,302	8,281
NATIONAL	4,119,271	4,138,506	4,153,878	4,170,656	4,187,365	4,202,263

TABLE 9  
(Family Allowances Division)

## AVERAGE ALLOWANCE PER CHILD

March, 1950

Newfoundland.....	\$5.99
Prince Edward Island.....	6.04
Nova Scotia.....	6.03
New Brunswick.....	5.99
Quebec.....	6.01
Ontario.....	6.02
Manitoba.....	6.02
Saskatchewan.....	6.06
Alberta.....	6.00
British Columbia.....	5.96
Northwest Territories and Yukon....	0.25
NATIONAL.....	6.01

TABLE 10  
(Family Allowances Division)

## COMPARATIVE STATEMENT OF FAMILY ALLOWANCES PAYMENTS

Between Month of March, 1949 and Month of March, 1950

Province	Month of March, 1949						Month of March, 1950					
	Families in Pay			Children in Pay			Families in Pay			Children in Pay		
	Number	Average Allowance per Family	Amount Paid	Number	Average Allowance per Child	Amount Paid	Number	Average Allowance per Family	Amount Paid	Number	Average Allowance per Child	Amount Paid
	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.
Newfoundland												
Prince Edward Island	12,920	14.89	192,439	32,621	5.90	192,439	50,694	16.48	835,334	139,571	5.99	835,334
Nova Scotia	88,927	13.76	1,224,093	297,282	5.90	1,224,093	13,165	15.41	202,853	33,588	6.04	202,853
New Brunswick	70,610	14.96	1,056,297	181,921	5.81	1,056,297	91,012	14.18	1,291,026	213,981	6.03	1,291,026
Quebec	488,263	15.47	7,555,992	1,302,242	5.80	7,555,992	72,410	15.61	1,130,338	188,593	5.99	1,130,338
Ontario	575,961	11.81	6,803,098	1,140,778	5.96	6,803,098	507,727	16.00	8,124,539	1,350,588	6.01	8,124,539
Manitoba	101,917	12.36	1,259,377	211,752	5.95	1,259,377	603,847	12.01	7,252,071	1,204,558	6.02	7,252,071
Saskatchewan	115,170	13.37	1,539,635	258,370	5.96	1,539,635	105,611	12.58	1,328,884	220,862	6.02	1,328,884
Alberta	124,173	12.75	1,582,711	266,133	5.95	1,582,711	116,917	13.56	1,585,299	261,623	6.06	1,585,299
British Columbia	147,630	11.24	1,659,147	279,769	5.93	1,659,147	130,686	12.89	1,685,215	280,780	6.00	1,685,215
Northwest Territories and Yukon	3,579	12.71	45,478	7,785	5.84	45,478	156,367	11.44	1,788,233	299,838	5.96	1,788,233
							3,833	13.51	51,804	8,281	6.25	51,804
NATIONAL	1,729,150	13.25	22,918,267	3,888,663	5.89	22,918,267	1,852,269	13.64	25,275,796	4,202,263	6.01	25,275,796

TABLE 10 (Concluded)

INCREASE SHOWN IN COMPARING FAMILY ALLOWANCES PAYMENTS

March, 1949 and March, 1950

Province	Increase in Number of Families in Pay		Increase in Number of Children in Pay		Increase in Amount Paid	
	Number	Percent	Number	Percent	Amount	Percent
Newfoundland	50,694		139,571		835,534	
Prince Edward Island	245	1.90%	967	2.96%	\$ 10,414	5.41%
Nova Scotia	2,085	2.34	6,699	3.23	66,933	5.47
New Brunswick	1,800	2.55	6,672	3.67	74,041	7.00
Quebec	19,464	3.99	48,346	3.71	568,547	7.52
Ontario	27,880	4.84	63,780	5.59	448,973	6.60
Manitoba	3,694	3.62	9,110	4.30	69,507	5.52
Saskatchewan	1,747	1.52	3,253	1.26	45,664	2.96
Alberta	6,513	5.24	14,647	5.50	102,504	6.48
British Columbia	8,737	5.92	20,069	7.17	129,086	7.78
Northwest Territories and Yukon	254	7.10	496	6.37	-9,235*	-15.13
NATIONAL	123,119	7.12%	313,610	8.06%	\$2,341,968	10.21%

\* Decrease in amount paid is accounted for by the large adjustment payments made during the month of March 1949.

TABLE 11  
Family Allowances Division

## TRANSFER OF FAMILY ALLOWANCES ACCOUNTS BETWEEN PROVINCES

Fiscal Year 1949-50

	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	N.W.T. and Yukon	Total
TRANSFERS IN:												
April	—	19	89	50	176	403	133	185	250	298	17	1,620
May	46	26	127	71	251	583	215	287	321	305	20	2,252
June	41	56	175	128	308	646	249	308	362	401	27	2,701
July	27	52	115	114	246	601	311	314	403	428	20	2,640
Aug.	26	45	146	71	246	587	207	182	352	351	28	2,241
Sept.	18	36	184	131	380	669	274	299	505	550	39	3,085
Oct.	59	52	191	136	337	1,000	319	274	404	587	31	3,390
Nov.	34	40	205	129	487	808	341	259	503	664	45	3,605
Dec.	47	18	145	129	320	827	206	209	466	528	27	2,822
Jan.	37	29	128	88	360	703	219	204	335	533	34	2,670
Feb.	24	17	120	75	272	501	166	139	283	314	26	1,937
March	37	17	151	53	286	450	151	155	205	242	19	1,706
Total	398	407	1,776	1,175	3,669	7,778	2,791	2,815	4,479	5,101	342	30,729
TRANSFERS OUT:												
April	—	24	127	97	209	330	218	225	233	354	26	1,843
May	3	20	169	119	224	503	218	207	201	434	16	2,204
June	24	37	221	158	377	878	219	259	254	436	9	2,872
July	42	30	153	82	293	492	392	351	305	425	18	2,573
Aug.	58	20	130	116	233	477	231	332	287	405	17	2,318
September	65	38	166	143	464	765	274	539	288	463	39	3,244
October	89	60	285	234	414	691	272	531	374	586	32	3,368
November	97	40	230	189	431	430	388	696	383	347	24	3,616
December	50	47	184	174	342	430	354	589	169	255	18	2,612
January	65	30	197	139	215	513	225	346	462	277	22	2,491
February	44	30	135	118	219	379	164	218	235	302	12	1,856
March	19	23	104	158	232	386	154	213	214	249	15	1,767
Total	556	461	2,161	1,727	5,653	6,835	3,169	4,596	3,465	4,333	248	30,774

Note: Difference of 35 accounts in transit between provinces.

TABLE 12  
(Family Allowances Division)

CLASSIFICATION OF FAMILIES BY NUMBER OF CHILDREN,  
Showing Increases and Decreases in Number of Families, with Percentages

Number of Children in Family	Number of Families as at				
	March 31, 1946	March 31, 1947	March 31, 1948	March 31, 1949	March 31, 1950
1 Child.....	554,026	645,684	685,251	699,905	730,586
2 Children.....	385,464	444,415	472,448	495,176	539,831
3 ".....	207,241	231,494	238,512	254,682	278,161
4 ".....	114,992	120,872	124,277	127,679	140,051
5 ".....	63,676	67,024	67,602	69,298	74,380
6 ".....	37,352	38,012	37,126	38,277	41,353
7 ".....	21,486	21,967	22,088	21,783	23,721
8 ".....	12,164	12,471	12,365	12,141	13,027
9 ".....	6,210	6,349	6,132	6,130	6,676
10 ".....	2,871	2,907	2,766	2,653	2,895
11 ".....	1,132	1,152	991	1,038	1,149
12 ".....	320	307	304	301	350
13 ".....	106	78	67	76	74
14 ".....	13	17	14	10	13
15 ".....	1	2	1	1	2

TABLE 13  
(Family Allowances Division)

STATE OF BIRTH VERIFICATION

Province	Balance still to be verified March 31, 1948	Balance still to be verified March 31, 1949	Balance still to be verified March 31, 1950
Newfoundland.....			30,528
Prince Edward Island.....	204	351	230
Nova Scotia.....	5,980	1,953	1,432
New Brunswick.....	12,528	3,365	4,479
Quebec.....	294,108	95,731	88,905
Ontario.....	23,052	23,709	17,883
Manitoba.....	3,212	3,911	2,642
Saskatchewan.....	2,906	3,220	2,491
Alberta.....	6,280	5,289	3,276
British Columbia.....	6,178	6,570	4,642
Northwest Territories and Yukon.....	1,054	563	313
TOTAL.....	355,502	144,662	156,821

TABLE 14  
(Family Allowances Division)

## ACCOUNTS IN PAY

THROUGH

Province	Child Placing Agencies		Administrators and Trustees	
	March 31, 1949	March 31, 1950	March 31, 1949	March 31, 1950
Newfoundland .....		221		
Prince Edward Island.....			3	3
Nova Scotia .....	860	920	21	39
New Brunswick.....	203	263	52	37
Quebec .....	2,709	3,446	72	49
Ontario .....	5,914	6,241	114	164
Manitoba.....	660	711	89	26
Saskatchewan.....	780	797	40	50
Alberta .....	530	611	58	79
British Columbia.....	1,194	1,426	5	6
Northwest Territories and Yukon.....			4	3
TOTAL.....	12,850	14,636	458	456

TABLE 15

(Family Allowances Division)

An amendment to the Family Allowances Act effective April, 1949 cancelled the provision for deductions in payments for families with excess of four children

## STATEMENT OF NUMBERS OF FAMILIES AND CHILDREN AFFECTED (April 1949)

Province	Size of Family										
	5	6	7	8	9	10	11	12	13	14	15
Newfoundland.....	3,423	2,029	1,116	507	190	59	17	2			
Prince Edward Island.....	774	455	219	124	65	35	9	1	2		
Nova Scotia.....	4,073	2,356	1,290	671	316	119	53	10	2		
New Brunswick.....	4,091	2,647	1,589	961	445	164	73	18	5		
Quebec.....	31,334	19,286	12,006	7,422	4,001	1,807	765	225	59	12	1
Ontario.....	14,872	7,143	3,333	1,768	711	277	91	33	5	1	
Manitoba.....	3,142	1,510	798	349	148	57	17	4			
Saskatchewan.....	4,451	2,220	1,077	566	241	113	28	10			
Alberta.....	4,212	1,883	868	382	149	62	17	5	1	1	
British Columbia.....	2,706	1,117	491	174	81	23	9	3			
Northwest Territories and Yukon.....	136	51	20	3							
National.....	73,214	40,697	22,807	12,927	6,347	2,716	1,079	311	74	14	1

TABLE 15 (Continued)

Province	Number of Accounts Affected	Number of Children Affected	Amount of Monthly Adjustment
Newfoundland	7,343	14,296	\$ 22,391.00
Prince Edward Island	1,684	3,461	5,650.00
Nova Scotia	8,890	18,102	28,319.50
New Brunswick	9,993	21,905	36,871.00
Quebec	76,918	174,276	295,674.50
Ontario	28,234	52,402	80,089.00
Manitoba	6,025	11,185	17,191.00
Saskatchewan	8,706	16,545	25,933.00
Alberta	7,580	13,405	20,182.50
British Columbia	4,604	7,739	11,016.50
Northwest Territories and Yukon	210	310	413.00
NATIONAL	160,187	333,626	\$ 543,731.00

TABLE 16  
(Family Allowances Division)

OVERPAYMENTS OF FAMILY ALLOWANCES REMAINING UNPAID

March 31, 1950.

(These overpayments may have occurred at any time between July 1, 1945, and March 31, 1950)

Province	Overpayments Recoverable by Deductions		Overpayments Recoverable by Collections		Overpayments Considered Uncollectible		Total Overpayments Outstanding	
	Number of Accounts	Amount	Number of Accounts	Amount	Number of Accounts	Amount	Number of Accounts	Amount
Newfoundland.....	33	\$ 514.00	20	\$ 285.00	1	\$ 61.00	54	\$ 860.00
Prince Edward Island.....	26	778.00	6	43.00	1	37.00	33	858.00
Nova Scotia.....	96	2,951.00	136	4,014.72	29	945.00	261	7,911.72
New Brunswick.....	96	4,915.00	155	5,498.15	62	3,000.00	313	13,413.15
Quebec.....	1,667	118,578.99	2,616	195,626.12	197	19,216.87	4,480	333,421.98
Ontario.....	273	14,283.30	706	25,956.72	264	11,736.11	1,243	51,976.13
Manitoba.....	73	2,653.00	103	3,172.50	30	1,085.00	206	6,910.50
Saskatchewan.....	63	2,267.00	72	3,676.50	24	821.00	159	6,855.50
Alberta.....	126	4,872.00	181	4,383.00	48	3,302.90	355	12,557.90
British Columbia.....	149	4,574.00	140	5,079.50	53	2,288.25	342	11,941.75
Northwest Territories and Yukon.....	45	1,597.00	49	2,499.95	10	371.20	104	4,468.15
NATIONAL.....	2,647	\$ 157,983.29	4,184	\$ 250,326.16	719	\$ 42,865.33	7,550	\$ 451,174.78

TABLE 16 (Concluded)

Province	March, 1949 Total Overpayments Outstanding		March, 1950 Total Overpayments Outstanding		Increase or Decrease in Overpayments Outstanding as at March, 1949	
	Number of Accounts	Amount	Number of Accounts	Amount		
Newfoundland.....		.....	54	\$ 860.00	+\$ 860.00	
Prince Edward Island .....	22	\$ 313.00	33	858.00	+	545.00
Nova Scotia.....	257	8,276.00	261	7,911.72	-	364.28
New Brunswick.....	258	10,719.00	313	13,413.15	+	2,694.15
Quebec .....	4,704	309,299.09	4,480	333,421.98	+	24,122.89
Ontario .....	1,431	61,491.56	1,243	51,976.13	-	9,515.43
Manitoba.....	291	9,213.00	206	6,910.50	-	2,302.50
Saskatchewan.....	164	6,208.40	159	6,855.50	+	647.10
Alberta .....	325	10,367.65	355	12,557.90	+	2,190.25
British Columbia.....	301	10,568.25	342	11,941.75	+	1,373.50
Northwest Territories and Yukon.....	63	2,939.00	104	4,468.15	+	1,529.15
NATIONAL .....	7,816	\$429,394.95	7,550	\$451,174.78	+	\$21,779.83

TABLE 17  
(Family Allowances Division)

## OVERPAYMENTS ESTABLISHED FOR FIRST TIME IN 1949-50

Category	Number of Accounts	%	Amount	%	Average O/P per account
Working for wages.....	3,851	28.1	\$122,774.00	(2) 20.2	\$ 32.00
Non-school attendance.....	2,679	19.6	63,470.00	(4) 10.3	24.00
Non-maintenance.....	2,489	18.1	132,223.00	(1) 21.6	53.00
Birth date errors.....	1,410	10.3	104,980.00	(3) 17.1	74.00
Child deceased.....	1,272	9.27	40,614.00	(6) 6.6	32.00
Non-resident.....	345	2.5	12,932.00	(8) 2.1	37.00
Duplicate accounts.....	319	2.3	49,716.00	(5) 8.1	156.00
Internal errors.....	288	2.1	14,464.00	(7) 2.4	50.00
Immigration requirements.....	4	0.03	605.00	(9) 0.1	151.00
Miscellaneous.....	1,066	7.7	69,557.81	11.5	65.00
TOTAL.....	13,723	100%	\$611,335.81	100%	\$45.00

NOTE: Table 16 has reference to overpayments *outstanding* on March 31, 1950, which overpayments may have been set up at any time from July 1, 1945, to March 31, 1950. Table 17 above refers only to overpayments established in 1949-50. Most of these overpayments were recovered in 1949-50, or will be recovered during 1950-51.

TABLE 18  
(Family Allowances Division)

CHILD PLACING AGENCIES' TRUST ACCOUNTS  
as of December 31, in each calendar year

Province	Year	Receipts	Expenditures	Percentage	Not Spent	Accum. Balance	No. of Children	Average Balance
		\$ cts.	\$ cts.	%	\$ cts.	\$ cts.		\$ cts.
Newfoundland.....	1949	22,617 00	13,081 25	57-84	9,535 75	9,535 75	358	26 64
Prince Edward Island.....	1946							
	1947							
	1948							
	1949	147 00	92 00	62-58	53 00	55 00	5	6 88
Nova Scotia.....	1946	128,189 96	56,561 59	44-12	71,628 37	71,628 37		
	1947	96,340 93	72,264 67	75-00	24,076 26	95,704 63		
	1948	104,799 06	84,451 85	80-58	20,347 21	116,051 84		
	1949	113,845 20	69,754 69	61-41	44,090 51	160,142 35	1,549	103 38
New Brunswick.....	1946	12,914 00	6,333 88	49-04	6,580 12	6,580 12		
	1947	11,684 58	6,111 65	52-30	5,572 93	12,153 05		
	1948	21,853 00	12,206 32	55-85	9,646 68	21,799 73		
	1949	34,653 38	23,394 13	67-51	11,259 25	33,058 98	577	57 29
Quebec.....	1946	98,421 00	16,524 30	16-78	31,896 70	81,896 70		
	1947	191,592 30	96,048 25	30-13	95,544 05	177,440 75		
	1948	221,948 60	178,444 90	80-39	45,503 60	220,944 35		
	1949	273,385 21	201,925 60	73-86	71,461 61	292,405 96	7,582	38 67
Ontario.....	1946	774,963 00	384,014 86	49-55	390,948 14	390,948 14		
	1947	682,707 84	478,384 75	70-07	204,328 09	595,271 23		
	1948	668,060 04	576,616 41	86-31	91,443 63	686,714 86		
	1949	709,193 51	646,182 17	91-11	63,011 34	749,726 20	14,084	53 23
Manitoba.....	1946	34,195 56	38,995 35	46-31	45,200 21	45,200 21		
	1947	71,981 36	82,658 99	73-15	19,322 37	64,522 08		
	1948	89,505 36	75,894 01	84-45	13,911 34	78,433 92		
	1949	76,194 45	64,230 15	85-42	10,964 30	89,398 22	1,576	56 72
Saskatchewan.....	1946	58,585 91	4,939 47	8-43	53,646 44	53,646 44		
	1947	64,219 20	31,775 10	49-47	32,444 10	86,090 54		
	1948	76,878 53	47,554 76	60-29	31,323 77	117,414 31		
	1949	30,363 11	63,295 11	66-32	27,068 00	144,482 31	1,690	84 90
Alberta.....	1946	37,709 80	13,532 91	35-88	24,176 89	24,176 89		
	1947	41,688 72	20,946 57	50-24	20,742 15	44,919 04		
	1948	44,159 74	28,957 05	65-64	15,172 69	60,091 73		
	1949	70,605 18	44,167 44	62-55	26,437 74	86,644 86	1,400	61 89
British Columbia.....	1946	143,628 95	134,467 79	93-62	9,161 16	9,161 16		
	1947	77,455 26	64,750 15	83-59	12,705 11	21,866 27		
	1948	78,223 13	65,390 08	83-59	12,833 05	34,699 32		
	1949	80,249 21	65,028 68	81-03	15,220 53	49,919 85	1,593	26 51
Northwest Territories..... and Yukon	1946							
	1947							
	1948							
	1949							
Dominion Totals.....						1,615,369 48	30,687	52 64

TABLE 19  
(Family Allowances Division)

## REGIONAL OFFICERS' SUMMARY

Report for Year Ending March 31, 1950

## 1. Registrations Received

	<i>Applicants</i>	<i>Children</i>
(a) Original (white) registrations.....	168,634	194,813
(b) Supplementary (blue) registrations.....	247,117	253,287
(c) Transfers In (from other Provinces).....	31,447	55,758

TOTAL.....	447,198	503,858
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3. Number of active accounts.....		1,866,034
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2. Suspended accounts at end of year.....		13,765
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## 4. School attendance and Juvenile Work

(a) Number of children reported.....		67,987
--------------------------------------	--	--------

(b) Number of children in respect of whom allowances were discontinued:		
---	--	--

(i) working for wages.....		22,898
----------------------------	--	--------

(ii) unlawful absence from school.....		10,475
--	--	--------

TOTAL.....		33,373
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(c) Number of children on whose behalf allowances were reinstated:		
--	--	--

(i) having ceased to work for wages.....		1,743
--	--	-------

(ii) having resumed attendance at school.....		8,670
---	--	-------

TOTAL.....		10,413
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## 5. Welfare Investigations Completed

(a) Through Provincial Government.....		3,117
--	--	-------

(b) Through other agencies.....		1,329
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(c) By Regional Office staff.....		4,571
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TOTAL.....		9,017
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TABLE 20  
(Food and Drug Divisions)

## DRUGS EXAMINED

Fiscal Year 1949-50

Laboratory at	Domestic	Imports	Total	Passed by Inspectors at Customs	Grand Total	Adulterated	Mis-branded	O.I.*
Halifax.....	253	1,176	1,429	978	2,407	70	328	1
Montreal.....	1,361	618	1,979	15,015	16,994	80	581	
Ottawa.....	413	43	456	141	597	65	1	
Toronto.....	323	1,184	1,507	3,435	4,942	22	539	52
Winnipeg.....	479	1,452	1,931	5,893	7,824	28	1,079	1
Vancouver.....	522	1,592	2,114	3,523	5,637	51	936	259
TOTAL....	3,351	6,065	9,416	28,985	38,401	316	3,464	313

\*O.I.—Other Infractions.

TABLE 21  
(Food and Drug Divisions)

EXAMINATION OF DOMESTIC FOODS  
Fiscal Year 1949-50

	Laboratories						Adult- erated	Mis- brand- ed	* O.I.	Totals
	Hali- fax	Mont- real	Otta- wa	To- ronto	Winni- peg	Van- couver				
Alimentary Pastes.....	1	2		8	13		1	8		24
Baking Powder—Leavening.....										
Agents or Chemicals.....	19	10		18	15	1	7	5		63
Bakery Products—Cakes, Pastry, etc.....	110	12	17	43	20	6	2	138		208
Beverage and Beverage Concen- trates.....	239	529	2	119	214	32	36	188		1135
Bread, Flour and Cereals.....	84	380	30	17	55	8	40	62		574
Breakfast Foods.....			2	4	1			2		7
Confectionery.....	121	9	15	26	54	13	15	122		238
Dairy Products.....	100	641	111	408	210	84	995	30		1554
Dessert Powders and Mixes.....	73	98		31	36			96		238
Eggs and Egg Products.....	201	16	1	3	1	2	23	2		7
Fish and Fish Products.....			30	13	11	209	37	37		480
Food Colours and Flavours.....	101	7	28	30	46	7	19	79		219
Fruit—Fresh.....	1	2			14			1		17
Fruit—Canned.....	103	16	4	11	21	7	201	12		162
Fruit—Dried.....	35		24	9	15	9	7	3		92
Fruit—Glazed or Candied.....	3			2	29	2	1	14		36
Gelatin.....	1	2	25		3		2	1		31
Honey or Honey Products.....	21	1	7		24		4	18		53
Jams and Jellies.....	42	1		164	15	2	14	18		224
Juices and Syrups.....	27	7	7	2	86	3	3	24		132
Lard and Shortening.....			17			4				21
Liquors Distilled and Fermented.....	64		13			18		1	18	95
Meat and Meat Products.....	146	661	65	85	246	357	327	814		1560
Nuts.....	14	1	11	19	35	3	10	27		83
Oils.....	11	7		11	1			5		30
Pickles.....	14			2	56		3	10		72
Preservatives.....				3	2			2		5
Salad Dressings—Sandwich.....										
Spreads and other Condiments.....	30		4	29	38	8	16	41		109
Soup and Soup Mixes.....	1		1		5			2		7
Spices.....	64	17	1	41	39	84	10	56		246
Sugar and Substitutes.....	12	1			9			8		22
Sweeteners, Artificial.....	1									1
Syrups and Molasses.....	15	3		2	14	1	6	17		35
Vegetables—Canned.....	400	2	5	1108	61	2	95	12	1	1578
Vegetables—Dried.....	4	17	6	7	4	7	2	7		45
Vegetables—Fresh.....	5		1	4	1			4		11
Vinegar.....	32			15				6		50
Water.....	19	20	6		13			18		58
Miscellaneous.....	14		9	7	42	1	6	12		73
Grand Totals.....	2128	2462	442	2241	1452	870	†1854	†1903	†19	9595

† Not included in Grand Totals.  
\* Other Infractions.

TABLE 22  
(Food and Drug Divisions)

## EXAMINATION OF IMPORTED FOODS

Fiscal Year 1949-50

	Laboratories						Adult- erated	Mis- brand- ed	Totals
	Hali- fax	Mont- real	Otta- wa	Tor- onto	Winni- peg	Van- couver			
Alimentary Pastes.....		1						1	1
Baking Powder-Leavening Agents or Chemicals.....	2					1		1	3
Bakery Products—Cakes, Pastry, etc....	4	13		43	14	75		33	149
Beverage and Beverage Concentrates.....	14	3		12	52	29	9	28	110
Bread, Flour and Cereals.....	5	9		1	4	21	1	13	40
Confectionery.....	43	46	12	41	85	295	19	132	522
Dairy Products.....	13	176		16	11	77	43	96	293
Dessert Powders and Mixes.....		3	3	5		3	2	3	14
Eggs and Egg Products.....				1				1	1
Fish and Fish Products.....	39	63	1	27	288	130	94	53	548
Food Colours and Flavours.....	12	6		18	4	33	4	29	73
Food, Oriental.....	12				130			105	142
Fruit—Fresh.....	13	41	5		850	478	14	5	1,387
Fruit—Canned.....	4	2		2		122		3	130
Fruit—Dried.....	525	220	6	142	82	462	20	13	1,437
Fruit—Glazed or Candied.....						1			1
Gelatin.....	2		3			2	2		7
Honey and Honey Products.....	3								3
Jam and Jellies.....	3			3		15	2	4	21
Juices and Syrups.....	134	3		1	1	42		21	181
Liquors Distilled and Fermented.....	1								1
Meat and Meat Products.....	1			6		5		5	12
Nuts.....	721	741	15	321	718	666	81	39	3,182
Oils.....	2	23		6		12		15	43
Pickles.....	1				3			3	4
Preservatives.....		1			3			3	4
Salad Dressings—Sandwich Spreads and Other Condiments.....	13			10	14	30	2	20	67
Spices.....	53	146	1	11	66	89	17	20	366
Sugar Substitutes.....	1								1
Syrups and Molasses.....	51	428				1	19		480
Vegetables—Canned.....	1			2		11		1	14
Vegetables—Dried.....	2	3	1	1	13	26		5	46
Vegetables—Fresh.....	1						1		1
Vinegar.....		7		1		7		2	15
Water.....		3							3
Miscellaneous.....	12			9	40	11	2	18	72
Grand Totals.....	1,688	1,938	47	679	2,378	2,644	332*	672*	9,374

\* These totals are not included in the Grand Total.

TABLE 23  
(Narcotic Control Division)

IMPORTS OF MAIN NARCOTICS  
For Period 1940-1949 Inclusive

Unit of Weight—Ounce, Pure Drug

Year	Raw Opium	Medicinal Opium and Pre- para- tions	Morphine	Heroin	Cocaine	Ethyl- morphine	Dilaudide	Papaverine	Codeine	Denenorol	Amidone
1940.....	4,961	5,839	4,940	1,130	819	352	13	20	35,518	.....	.....
1941.....	5,600	15,032	3,354	880	1,681	764	9	139	16,120	.....	.....
1942.....	.....	2,088	2,865	682	1,831	147	14	122	15,291	.....	.....
1943.....	1,344	9,390	4,360	964	2,338	844	14	46	9,777	.....	.....
1944.....	1,056	416	5,229	468	1,233	2,131	10	354	26,149	1,211	.....
1945.....	4,000	3,842	4,791	762	361	1,195	19	571	23,122	2,085	.....
1946.....	4,000	4,614	1,181	1,020	1,797	664	23	805	35,885	5,539	.....
1947.....	3,360	6,458	1,046	906	2,169	745	18	961	36,915	9,018	.....
1948.....	3,200	3,040	3,013	1,019	993	919	26	2,809	34,058	5,175	892
1949.....	1,720	3,202	3,168	906	666	1,433	11	943	37,751	4,106	1,068

TABLE 24  
(Narcotic Control Division)  
ESTIMATED CONSUMPTION OF THE MAIN NARCOTICS  
For period 1940-1949 Inclusive

Year	Raw Opium	Medicinal Opium and Pre- para- tions	Morphine	Heroin	Cocaine	Ethyl- morphine	Dilaudide	Papaverine	Codeine	Demerol
1940.....	6,173	5,538	3,527	882	1,446	498	13	168	18,143	.....
1941.....	2,363	10,123	3,527	1,023	1,376	528	14	56	19,964	.....
1942.....	3,562	8,219	3,704	917	1,517	615	14	138	21,983	.....
1943.....	3,704	5,645	4,445	811	1,623	739	12	171	21,630	.....
1944.....	3,810	7,090	3,633	740	1,480	1,458	14	280	22,241	1,042
1945.....	3,175	6,314	3,351	670	1,305	691	12	381	22,809	1,102
1946.....	3,422	4,797	3,492	1,068	1,552	1,110	22	455	36,191	2,045
1947.....	3,932	4,734	3,090	881	1,390	1,107	15	715	36,484	5,894
1948.....	2,090	6,026	2,074	995	1,407	1,032	22	1,416	39,672	5,642
1949.....	2,010	3,606	2,718	898	1,197	949	16	1,359	44,443	6,852

TABLE 25

(Narcotic Control Division)

## CONVICTIONS UNDER THE OPIUM AND NARCOTIC DRUG ACT

For the Judicial Year Ended September 30, 1949

Province	NATURE OF OFFENCE			DRUGS INVOLVED										
	Possession of Drugs	Selling, Offering, or giving away and Delivering	Causing to be Transported	Total	Opium and Tr. Opium	Morphine	Heroin	Derivative of Morphine probably Heroin	Demerol	Marihuana	Cocaine	Alleged Drug	Methadone	Total
Newfoundland														
Prince Edward Island														
Nova Scotia														
New Brunswick														
Quebec	46	8		54	2	1	46			5				54
Ontario	121	6		127	3	11	97	7	6		1	1	1	127
Manitoba	9		1	10			9		1					10
Saskatchewan	2			2		1	1							2
Alberta	22	1		23	2	10	11							23
British Columbia	136	3		139	3	2	134							139
Totals	336	18	1	355	10	25	298	7	7	5	1	1	1	355

TABLE 26  
(Old Age Pensions Division)

NUMBER OF PENSIONERS AND PERCENTAGE OF POPULATION, BY PROVINCES

Fiscal Year 1949-50

Province	Number of pensioners	*Percentage of pensioners to total population	*Percentage of pensioners to population over 70 years of age
Alberta.....	16,445	1.89	46.45
British Columbia.....	28,988	2.60	43.20
Manitoba.....	16,868	2.17	45.71
New Brunswick.....	16,231	3.15	71.82
Newfoundland.....	10,296	2.96	77.41
Nova Scotia.....	19,966	3.10	58.04
Ontario.....	85,100	1.93	35.59
Prince Edward Island.....	2,976	3.17	46.50
Quebec.....	69,017	1.78	51.85
Saskatchewan.....	16,566	1.92	44.89
Northwest Territories.....	23	.19	12.57
Yukon Territory.....	108	2.20	32.93
CANADA.....	282,584	2.09	45.16

\*Percentages based on the estimated population as at June 1, 1949 (Dominion Bureau of Statistics) except Yukon Territory and Northwest Territories which are based on 1941 census.

TABLE 27  
(Old Age Pensions Division)

TOTAL PAYMENTS AND AVERAGE MONTHLY PAYMENTS, BY PROVINCES

Fiscal Year 1949-50

Province	Average Monthly Pension	Dominion's Payments for Fiscal Year 1949-50	Dominion's Payments since Inception of Act
Alberta.....	\$ 37.90	\$ 5,182,534.12	\$ 39,037,016.61
British Columbia.....	37.17	9,072,353.74	57,269,439.44
Manitoba.....	38.44	5,578,655.98	46,870,423.96
New Brunswick.....	36.22	5,083,788.47	31,840,502.74
Newfoundland.....	29.47	2,229,446.41	2,229,446.41
Nova Scotia.....	35.41	6,050,998.50	42,029,324.04
Ontario.....	38.06	27,863,894.69	223,230,255.24
Prince Edward Island.....	34.36	865,299.30	4,855,471.81
Quebec.....	37.73	22,328,643.76	141,666,155.56
Saskatchewan.....	37.30	5,356,205.13	45,627,464.00
Northwest Territories.....	39.71	9,898.84	58,981.25
Yukon Territory.....	38.65	24,484.38	24,484.38
TOTAL.....		\$ 89,652,203.32	\$ 634,739,055.44

TABLE 28  
(Old Age Pensions Division)

NUMBER OF BLIND PENSIONERS AND PERCENTAGE OF POPULATION,  
BY PROVINCES

Fiscal Year 1949-50

Province	Number of Pensioners	*Percentage of Pensioners to total population
Alberta.....	453	·052
British Columbia.....	629	·056
Manitoba.....	539	·069
New Brunswick.....	1,047	·203
Newfoundland.....	171	·049
Nova Scotia.....	962	·149
Ontario.....	2,243	·051
Prince Edward Island.....	129	·137
Quebec.....	3,869	·100
Saskatchewan.....	472	·055
Northwest Territories.....	1	·008
Yukon Territory.....	2	·041
CANADA.....	10,517	·078

\* Percentages based on the estimated population as at June 1, 1949, (Dominion Bureau of Statistics) except Yukon Territory and Northwest Territories which are based on 1941 census.

TABLE 29  
(Old Age Pensions Division)

TOTAL PAYMENTS TO BLIND AND AVERAGE MONTHLY PAYMENTS,  
BY PROVINCES

Fiscal Year 1949-50

Province	Average Monthly Pension	Dominion's Payments for Fiscal Year 1949-50	Dominion's Payments since Inception of Act
Alberta.....	\$ 38.68	\$ 148,295.29	\$ 716,852.14
British Columbia.....	38.17	204,086.42	1,005,638.49
Manitoba.....	39.29	184,497.01	994,602.99
New Brunswick.....	39.06	357,877.50	2,047,991.90
Newfoundland.....	29.38	35,662.30	35,662.30
Nova Scotia.....	38.44	311,947.90	1,755,889.37
Ontario.....	38.88	778,909.71	4,367,169.02
Prince Edward Island.....	37.66	40,336.10	257,296.21
Quebec.....	39.07	1,312,410.08	6,905,809.43
Saskatchewan.....	38.91	161,883.66	936,132.55
Northwest Territories.....	40.00	585.00	1,580.00
Yukon Territory.....	40.00	240.00	240.00
TOTAL.....		\$ 3,536,730.97	\$ 19,024,864.40

TABLE 30  
(Physical Fitness Division)

ASSISTANCE TO PROVINCES AND PROVINCIAL EXPENDITURES

Under National Physical Fitness Act, 1949-50

Province	Expenditure					
	Total			Per Capita		
	Provincial	Federal	Total	Provincial	Federal	Total
	\$	cts.	\$	cts.	\$	cts.
Prince Edward Island.....	8,141.48	1,858.50	9,999.98	8-566	1-955	10-521
Nova Scotia.....	22,836.69	(b) 11,426.92	34,263.61	3-951	(b) 1-977	5-928
New Brunswick.....	11,963.39	8,943.75	20,907.14	2-616	1-955	4-571
Ontario.....	(a) 382,736.75	(a) 74,063.25	(a) 456,800.00	10-105	1-955	12-060
Manitoba.....	(a) 8,689.93	(a) 8,689.93	(a) 17,379.86	1-191	1-191	2-382
Saskatchewan.....	29,211.83	17,520.75	46,732.58	3-260	1-955	5-215
Alberta.....	27,002.73	15,567.75	42,570.48	3-391	1-955	5-346
British Columbia.....	101,007.00	15,993.00	(b) 117,000.00	12-351	1-955	14-306
Northwest Territories.....	5,743.05	234.00	5,977.05	49-683	1-955	51-638

(a) Estimated—final returns not available.  
(b) Includes payments for 15-month period.

TABLE 31  
(Quarantine Service)

## Ships Boarded By Quarantine Officers, 1949-50

The following table indicates the number of ships boarded during the fiscal year 1949-50, also total personnel on board, divided into their respective groups.

Station	Vessels Inspected	PERSONNEL INSPECTED						
		PASSENGERS				Crews	Cattlemen Stowaways Distressed Seamen etc.	Port Totals
		First Class	Cabin and Second Class	Tourist Third	Third Class and Steerage			
Halifax, N.S.....	490	7,437	4,386	47,000	8,247	43,429	62	110,561
Saint John, N.B.....	325	589	573	19	87	14,546	35	15,849
Quebec, P.Q.....	1,203	12,658	1,999	27,015	9,981	66,860	108	118,621
William Head, B.C....	776	1,551	1,300	325	218	34,451	44	37,889
TOTALS.....	2,794	22,235	8,258	74,359	18,533	159,286	249	282,920

TABLE 32  
(Quarantine Service)

VESSELS INSPECTED FOR DERATIZATION,  
1949-50

Port	Vessels Inspected, Fumigated and Deratization Certificates Issued	Vessels Inspected and Exemption Certificates Issued	Vessels Inspected and Time Extended or Certificates Endorsed	Total Vessels Inspected for Vermin	RODENTS RECOVERED	
					Rats	Mice
Halifax, N.S.....	9	52	1	62	17	77
Sydney, N.S.....		7		7		
Saint John, N.B.....	2	20	1	23		
Port Alfred, P.Q.....		28	1	29		
Quebec, P.Q.....	3	7		10		
Trois-Rivieres, P.Q.....		11		11		
Sorel, P.Q.....		3		3		
Montreal, P.Q.....	12	108	31	151	131	132
Vancouver, B.C.....	81	92	269	442	196	
Victoria, including Esqui- malt, B.C.....	1	19	39	59		
Port Alberni, B.C.....		8	17	25		
TOTALS.....	108	355	359	822	344	209

TABLE 33  
(Immigration Medical Service)

## SUMMARY OF ACTIVITIES

Fiscal Year 1949-50

<i>Canada</i>	
Immigrants medically inspected on arrival at ocean and air ports.....	78,762
Non-immigrants medically inspected on arrival at ocean and air ports.....	18,645
Certified as "prohibited" under Immigration Act, Sec. 3, (a), (b) and (k).....	29
Certified as physically defective, Sec. 3, (c).....	283
Refused permanent admission for medical reasons, at ocean and air ports.....	22
Total number rejected, at all ports.....	400
<i>Overseas—(United Kingdom, Continent and Orient)</i>	
Prospective emigrants medically examined.....	81,998
Certified as "prohibited" under Immigration Act, Sec. 3, (a), (b), (k) and (l).....	1,573
Certified as physically defective, Sec. 3, (c).....	10,933
Refused admission.....	1,943
Re-examinations.....	17,331
<i>United Kingdom</i>	
Prospective emigrants medically examined.....	21,835
<i>Continent</i>	
Prospective emigrants medically examined.....	58,270
<i>Orient</i>	
Prospective emigrants medically examined.....	1,893
<i>Examinations Overseas:</i>	
By Canadian Medical Officers in British Isles.....	11,730
By Roster Doctors in British Isles.....	10,105
By Canadian Medical Officers on the Continent.....	53,420
By Roster Doctors on the Continent.....	4,850
By Roster Doctors in the Orient.....	1,893
	<hr/> 81,998

TABLE 34  
(Immigration Medical Service)

## DETAILS OF EXAMINATIONS

Fiscal Year 1949-50

	Immigrants	Non-Immigrants
Gander, Newfoundland.....	1,164	2,185
St. John's, Newfoundland.....	555	360
Sydney, N.S.....	192	456
Halifax, N.S.....	40,193	2,538
Saint John, N.B.....	412	94
Moncton, N.B.....	17	15
Quebec, P.Q.....	24,647	6,796
Port Alfred, P.Q.....	67	110
Three Rivers, P.Q.....	12	7
Dorval, P.Q.....	1,472	2,955
Montreal, P.Q.....	677	588
Malton, Ont.....	171	963
Vancouver, B.C.....	521	1,206
Victoria, B.C.....	151	161
Other Ports.....	39	211
Ports (not stated).....	135	
U.S.A. Ports.....	8,337	
TOTAL.....	<hr/> 78,762	<hr/> 18,645
Rejections.....	400	

TABLE 35  
(Immigration Medical Service)  
CERTIFICATIONS AND DISPOSITIONS OF CASES  
Fiscal Year 1949-50  
CANADIAN PORTS

	Admitted	Deported	Pending	Totals
Section 3, s.s. (a), Mental diseases and defects.....		3	2	5
Section 3, s.s. (b), Loathsome diseases, including tuberculosis.....	9*	11	2	22
Section 3, s.s. (c), Physical diseases and defects.....	133	8	142	283
Section 3, s.s. (k), Constitutional psychopathic inferiority.....			2	2
TOTALS.....	142	22	148	312

\* Refugees.

## OVERSEAS

	CERTIFICATIONS					Totals
	British Isles		Continent			
	Examined by Canadian Medical Officers	Examined by Roster Doctors	Unoccupied Territory		Occupied Territory	
			Examined by Canadian Medical Officers	Examined by Roster Doctors	Examined by Canadian Medical Officers	
Section 3, s.s. (a), Mental diseases and defects.....	47	24	77	3	22	173
Section 3, s.s. (b), Loathsome diseases, including tuberculosis.....	242	134	242	78	541	1,237
Section 3, s.s. (c), Physical diseases and defects.....	1,945	1,410	2,526	366	4,696	10,943
Section 3, s.s. (k), Constitutional psychopathic inferiority....	39	14	4	0	5	62
Section 3, s.s. (l), Chronic alcoholism.....	1	0	0	0	0	1
Totals.....	2,274	1,582	2,849	447	5,264	12,416

TABLE 36  
(Sick Mariners Service)

TOTAL NUMBER OF VESSELS—DUES COLLECTED AND EXPENDITURES  
Calendar Year 1949

Vessels	Number Vessels Paying Dues	Total Dues Collected	Total Number of Crew	Total Expenditure	Average Expenditure for each Member of Crew
Foreign-going.....	2,081	\$ 223,798.62	76,223	\$ 267,310.47	\$ 3.50
Trading Continually between Canadian Ports.....	3,981	11,212.06	16,429	187,709.44	11.43
TOTAL.....	6,062	\$ 235,010.68	92,652	\$ 455,019.91	\$ 4.91

TABLE 37  
(Sick Mariners Service)

SICK MARINERS TREATMENT

Fiscal Year 1949-50

	Ontario	New- foundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	British Columbia	Total
Number of Doctors on salary (part time).....				11	2	3	4	20
Total salaries.....				\$12,530.00	\$1,824.00	\$2,880.00	\$6,440.00	\$23,674.00
Total number treated by Doctors (on salary).....				3,377	137	671	1,289	5,474
Total Number of Visits.....				10,300	499	920	9,810	21,529
Total Number of Doctors and Dentists (Fee Basis).....		30	22	85	43	54	64	298
Total Fees Paid.....		\$4,516.75	\$2,558.00	\$39,036.26	\$8,908.12	\$8,016.00	\$34,324.78	\$97,359.91
Total Number of Seamen Treated.....		575	192	3,601	955	643	3,411	9,377
Total Number of Visits.....		1,004	658	10,421	2,060	2,466	4,855	21,404
Hospitals Treating Sick Mariners.....	1	14	5	34	19	29	36	138
Total Hospital Costs.....	\$715.50	\$3,243.54	\$3,712.80	\$76,022.47	\$40,201.96	\$68,390.07	\$127,686.97	\$319,973.31
Total Number of Patients (at per diem rate).....	1	49	40	897	326	554	811	2,678
Total Number of Hospital Days.....	79	568	605	14,945	4,668	9,804	12,208	42,956
Total Number of Out-Patients.....		41	16	1,029	188	1,898	1,791	4,963
Total Number of Out-Patient Visits.....		44	31	1,320	264	3,778	4,477	9,914
Private Houses (Emergency Hospitals).....				5	1	1		7
Total Costs.....				\$836.00	\$31.00	\$62.00		\$929.00
Total Number of Seamen Treated.....				30	1	1		32
Total Number of Hospital Days.....				300	31	62		392
Clinics (Operated by Department) at—Halifax, Saint John, Quebec, and Vancouver.....				1	1	1	1	4
Total Cost.....				\$3,923.00	\$1,456.00	\$472.00	\$14,422.00	\$20,273.00
Total Number of Out-Patients.....				1,459	682	245	3,263	5,649
Total Number of Visits to Out-Patients.....				2,221	844	261	8,338	11,664



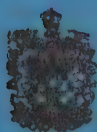


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DOMINION OF CANADA

ANNUAL REPORT  
OF THE  
DEPARTMENT OF NATIONAL  
HEALTH AND WELFARE

FOR THE  
FISCAL YEAR ENDED  
MARCH 31, 1951



OTTAWA  
Edmond Cloutier, C.M.G., O.A., D.S.P.  
Printer to the King's Most Excellent Majesty

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DOMINION OF CANADA

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1951

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Applications for copies of this publication should be addressed  
to the King's Printer, Ottawa



*To His Excellency Field Marshal the Right Honourable the Viscount  
Alexander of Tunis, K.G., G.C.B., G.C.M.G., C.S.I.,  
D.S.O., M.C., LL.D., A.D.C.,  
Governor-General and Commander-in-Chief of Canada.*

May it Please Your Excellency:

The undersigned has the honour to present to Your Excellency the  
Annual Report of the Department of National Health and Welfare for the  
fiscal year ended March 31, 1951.

Respectfully Submitted,

PAUL MARTIN,  
Minister of National Health and Welfare.

April 1, 1951.

35277



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# DEPARTMENT OF NATIONAL HEALTH AND WELFARE

## MINISTER

HONOURABLE PAUL MARTIN, K.C., P.C., M.P., M.A., LL.M., LL.D.

---

DEPUTY MINISTER OF NATIONAL HEALTH AND WELFARE (HEALTH)  
G. D. W. CAMERON, M.D., C.M., D.P.H.

DEPUTY MINISTER OF NATIONAL HEALTH AND WELFARE (WELFARE)  
G. F. DAVIDSON, B.A., M.A. Ph.D.

---

## HEALTH BRANCH

- |   |  |
|---|--|
| <i>Director of Health Services,</i><br>H. A. ANSLEY, M.D., D.P.H.                           | <i>Chief, Nutrition Division,</i><br>L. B. PETT, B.S.A., M.A., Ph.D.,<br>M.D., F.A.P.H.A., C.P.H.                            |
| <i>Assistant, B. D. B. LAYTON, M.D.</i>   |  |
| <i>Assistant Director of Health Services,</i><br>F. S. PARNEY, M.D.                         | <i>Chief, Public Health Engineering</i><br><i>Division,</i><br>J. R. MENZIES, B.A.Sc., O.L.S., C.E.                          |
| <i>Chief, Blindness Control Division,</i><br>J. H. GROVE, M.D.                              | <i>Chief, Quarantine, Immigration Medi-</i><br><i>cal and Sick Mariners Services,</i><br>H. D. REID, M.D.                    |
| <i>Chief, Child and Maternal Health</i><br><i>Division,</i><br>ERNEST COUTURE, M.D., C.M.   | <i>Director of Health Insurance Studies,</i><br>F. W. JACKSON, M.D., D.P.H.  |
| <i>Chief, Civil Aviation Medicine Division,</i><br>H. E. WILSON, M.D.                       | <i>Assistant Directors of Health Insurance</i><br><i>Studies,</i><br>G. E. WRIDE, M.D., D.P.H.<br>EMILE MARTEL, M.D., D.P.H. |
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| <i>Chief, Dental Health Division,</i><br>H. K. BROWN, D.D.S., D.D.P.H.                      | <i>Assistant Director, Food and Drug</i><br><i>Divisions,</i><br>A. PAPINEAU-COUTURE, B.A.                                   |
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| <i>Chief, Hospital Design Division,</i><br>H. G. HUGHES, B.Arch., A.R.I.B.A.,<br>M.R.A.I.C. | <i>A/Chief, Inspection Services,</i><br>W. A. CRANDALL, B.A., M.Sc.  |
| <i>Chief, Industrial Health Division,</i><br>K. C. CHARRON, M.D.                            | <i>Chief, Proprietary or Patent Medicines</i><br><i>Division,</i><br>L. P. TEEVENS.  |
| <i>Chief, Industrial Health Laboratory,</i><br>K. KAY, M.A., Ph.D.                          | <i>Director, Indian Health Services,</i><br>P. E. MOORE, M.D., D.P.H.  |
| <i>Chief, Laboratory of Hygiene,</i><br>J. GIBBARD, B.S.A., M.Sc.                           | <i>Assistant Directors, Indian Health</i><br><i>Services,</i><br>H. A. PROCTOR, M.D.,<br>O. LEROUX, M.D.                     |
| <i>Chief, Mental Health Division,</i><br>C. G. STOGDILL, M.A., M.D.                         |  |
| <i>Chief, Narcotic Control Division,</i><br>K. C. HOSSICK                                   |  |

**WELFARE BRANCH**

*National Director of Family  
Allowances,*  
R. B. CURRY, B.A., LL.B.

*Executive Assistant (Welfare),*  
Mrs. D. B. SINCLAIR, O.B.E.,  
B.A., M.A., LL.D.

*Director, Old Age Pensions Division,*  
J. W. MacFARLANE.

*Assistant Director, Physical Fitness  
Division,*  
DORIS W. PLEWES, M.A., B.Paed.,  
Ed.D.

**CIVIL DEFENCE**

Co-Ordinator. Maj. Gen. F. F. WORTHINGTON, C.B., M.C., M.M. (and Bar).

**ADMINISTRATION BRANCH**

*Departmental Secretary,*  
Miss O. J. WATERS.

*Legal Adviser,*  
R. E. CURRAN, K.C., B.A., LL.B.

*A/Director, Information Services  
Division,*  
F. W. ROWSE, M.J.I.

*Chief, Research Division,*  
J. W. WILLARD, M.A., M.P.A., A.M.

*Departmental Librarian,*  
Miss M. D. MORTON, B.H.Sc., B.L.S.

*Chief, Purchasing and Supply Division,*  
J. A. HICKSON.

*Chief, Personal Division,*  
H. S. HODGINS, M.B.E., B.A.

---

*Chief, Translation Office,*  
G. A. SAUVE.

*Chief Treasury Officer,*  
T. F. PHILLIPS

# DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS

## ADMINISTRATIVE OFFICES

OTTAWA—Jackson Building, Bank and Slater Streets

## FAMILY ALLOWANCES REGIONAL OFFICES

ST. JOHN'S—29 Buckmasters' Field  
CHARLOTTETOWN—59 Queen Street  
HALIFAX—Industrial Building  
FREDERICTON—City Hall  
QUEBEC—51 Boulevard des Capucins  
TORONTO—122 Front Street West  
WINNIPEG—Lindsay Building  
REGINA—Saskatchewan Motors Building, Broad Street  
EDMONTON—10201, 100th Street  
VICTORIA—Weiler Building

## FOOD AND DRUG LABORATORIES

OTTAWA—35 John Street  
HALIFAX—Dominion Public Building (P.O. Box 605)  
MONTREAL—379 Common Street  
TORONTO—65 Victoria Street  
WINNIPEG—Aragon Building, 244 Smith Street  
VANCOUVER—Federal Building, 325 Granville Street

## IMMIGRATION MEDICAL SERVICE OFFICES

### Canada

GANDER—Gander Airport (P.O. Box 144)  
HALIFAX—Immigration Building, Pier 21  
NORTH SYDNEY—Immigration Building  
SAINT JOHN—Quarantine Hospital (P.O. Box 1406)  
QUEBEC—Savard Park Immigration Hospital  
MONTREAL—Immigration Building, 1162 St. Antoine Street  
VICTORIA—Immigration Building

### Overseas

LONDON—42-46 Weymouth Street, Marylebone, W.1.  
THE HAGUE—Canadian Embassy  
BRUSSELS—Canadian Embassy  
PARIS—Canadian Embassy  
ROME—Canadian Embassy  
STOCKHOLM

## INDIAN HEALTH SERVICES

### Hospitals

PRINCE RUPERT, B.C.—Miller Bay Indian Hospital  
NANAIMO, B.C.—Nanaimo Indian Hospital  
SARDIS, B.C.—Coqualeetza Indian Hospital  
§CARDSTON, ALTA.—Blood Indian Hospital  
GLEICHEN, ALTA.—Blackfoot Indian Hospital  
EDMONTON, ALTA.—Charles Camsell Indian Hospital  
FORT QU'APPELLE, SASK.—Fort Qu'Appelle Indian Hospital  
NORTH BATTLEFORD, SASK.—North Battleford Indian Hospital  
HODGSON, MAN.—Fisher River Indian Hospital  
PINE FALLS, MAN.—Fort Alexander Indian Hospital  
\*SELKIRK, MAN.—Dynevour Indian Hospital  
\*THE PAS, MAN.—Clearwater Lake Indian Hospital  
\*BRANDON, MAN.—Brandon Indian Hospital  
NORWAY HOUSE, MAN.—Norway House Indian Hospital  
MANITOWANING, ONT.—Manitowaning Indian Hospital  
MOOSE FACTORY, ONT.—Moose Factory Indian Hospital  
OSHWEKEN, ONT.—Lady Willingdon Indian Hospital  
SIOUX LOOKOUT, ONT.—Sioux Lookout Indian Hospital

**Nursing Stations**

Cape Dorset, N.W.T.  
 Coppermine, N.W.T.  
 Fort McPherson, N.W.T.  
 Fort Norman, N.W.T.  
 Lake Harbour, N.W.T.  
 Brocket, Alta.  
 Driftpile, Alta.  
 Morley, Alta.  
 Saddle Lake, Alta.  
 Lac La Ronge, Sask.  
 Leask, Sask.  
 God's Lake, Man.  
 Island Lake, Man.  
 Oxford House, Man.  
 Nelson House, Man.

Little Saskatchewan (Gypsumville),  
 Man.  
 Cross Lake, Man.  
 Big Trout Lake, Ont.  
 Fort William, Ont.  
 Lac Seul, Ont.  
 Osnaburgh House, Ont.  
 Fort Chimo, Que.  
 Fort George, Que.  
 Bersimis, Que.  
 Port Harrison, Que.  
 Ruperts House, Que.  
 §Perth, N.B.  
 Eskasoni, N.S.

**Health Centres**

Sydney, N.S.  
 Schubencadie, N.S.  
 Lennox Island, P.E.I.  
 Newcastle, N.B.  
 Restigouche, Que.  
 Seven Islands, Que.  
 Caughnawaga, Que.  
 Maniwaki, Que.  
 Loretteville, Que.  
 Barriere (seasonal)  
 Notre Dame du Nord, Que.  
 Amos, Que.  
     Obidjiwan (seasonal)  
     Mistassini (seasonal)  
     Maniwan (seasonal)  
     Waswanipi (seasonal)  
 Point Bleue, Que.  
 St. Regis, Ont.  
 Deseronto, Ont.  
 Muncey, Ont.  
 Sarnia, Ont.  
 Ohsweken, Ont.  
 Christian Island, Ont.  
 Chapleau, Ont.  
 Port Arthur, Ont.  
 Sault Ste. Marie, Ont.  
 Walpole Island, Ont.  
 Kenora, Ont.  
 The Pas, Man.  
 Sandy Bay, Man.  
 Rossgburn, Man.

Broadview, Sask.  
 Punnichy, Sask.  
 Prince Albert, Sask.  
 Hobbema, Alta.  
 Good Fish Lake, Alta.  
 St. Paul, Alta.  
 Fort St. James, B.C.  
 Williams Lake, B.C.  
 Kamloops, B.C.  
 Hazelton, B.C.  
 New Westminster, B.C.  
 Duncan, B.C.  
 Alert Bay, B.C.  
 Kincolith, B.C.  
 Port Simpson, B.C.  
 Port Edward, B.C.  
 Prince Rupert, B.C.  
 Greenville, B.C.  
 Vancouver, B.C.  
 Whitehorse, Y.T.  
     Carmacks (seasonal)  
     Teslin (seasonal)  
 Fort Smith, N.W.T.  
 Fort Resolution, N.W.T.  
 Fort Simpson, N.W.T.  
 Aklavik, N.W.T.  
 Chesterfield Inlet, N.W.T.  
 Pangnirtung, N.W.T.  
 Fort Rae, N.W.T.  
 Coral Harbour, N.W.T.

§ Departmental hospitals staffed by religious orders on stipend.

\* Departmental sanatoria, staffed and operated by the Sanatorium Board of Manitoba, with reimbursement on a per diem basis.

**INDUSTRIAL HEALTH LABORATORY**

OTTAWA—200 Kent Street

**LABORATORIES OF HYGIENE**

OTTAWA—45 Spencer Street

KAMLOOPS, B.C.

**PUBLIC HEALTH ENGINEERING DISTRICT OFFICES**

MONCTON—General Motors Building

MONTREAL—1162 St. Antoine Street

ST. CATHARINES—4th floor, Dominion Building

PORT ARTHUR—Room 1, Customs Building

WINNIPEG—207 Scientific Building, 425½ Portage Avenue

EDMONTON—Room 406, Post Office Building

VANCOUVER—425 Howe Street

**QUARANTINE STATIONS**

HALIFAX—Rockhead Hospital

SAINT JOHN—Quarantine Hospital (P.O. Box 1406)

QUEBEC—Louise Basin and Savard Park Immigration Hospital

MONTREAL—379 Common Street

VANCOUVER—Immigration Building

VICTORIA—William Head, B.C.

**SICK MARINERS CLINICS AND HOSPITALS**

HALIFAX—Immigration Building, Pier 21

SYDNEY—Marine Hospital

LUNENBURG—Marine Hospital

SAINT JOHN—Quarantine Hospital

QUEBEC—Louise Basin

VANCOUVER—Immigration Building

*To the Honourable Paul Martin, K.C., P.C., M.P., M.A., LL.M., LL.D.,  
Minister of National Health and Welfare, Ottawa.*

SIR,—We have the honour to present, herewith, the Annual Report of the Department of National Health and Welfare, for the fiscal year ended March 31, 1951.

Respectfully Submitted,

G. D. W. CAMERON,  
*Deputy Minister of National Health  
and Welfare (Health)*

G. F. DAVIDSON,  
*Deputy Minister of National Health  
and Welfare (Welfare)*

OTTAWA,  
April 1, 1951.

## FOREWORD

Notable gains were made during the year in services to strengthen and preserve the health and social welfare of the people of Canada. A number of important events occurred in both health and welfare fields and substantial progress was made in programs administered by the different divisions of the Department.

A new conception of national responsibility for the welfare of older persons was crystallized in the recommendations of the Joint Parliamentary Committee on Old Age Security and the foundation of planning was laid, through the National Conference on the Rehabilitation of Disabled Persons, for the building up of existing rehabilitation services to a point where they can provide for the needs of all disabled persons in Canada.

The progressive development of provincial health services under the National Health Program was accelerated as staff were trained and new facilities acquired. As the health surveys being carried out under the program by the provinces approached completion, the picture became increasingly clear as to the needs in different provinces that could be met through the aid of the federal grants. To complement the assistance made available for the building up of health and hospital services to serve the general population, the Department's expanding program of health care for Indians and Eskimos continued to be strengthened through the extension of both preventive and treatment services.

New approaches to the improvement of health in Canada were also begun through the Canadian Sickness Survey, which commenced during the year in all provinces. Through the survey, information will be provided on the extent and prevalence of illness in Canada which has never hitherto been available and which will be of great importance in future health planning. A number of other studies carried on in different phases of health activity will also contribute to this work and a survey of the extent of the demand for social workers in Canada, for which preparations began during the year, will materially assist the charting of progress in the welfare field.

New duties were assumed by the Department when, in February 1951, responsibility for federal civil defence functions was transferred from the Minister of National Defence to the Minister of National Health and Welfare. Organizational planning of the different health and welfare aspects of civil defence had been commenced prior to this transfer. Since responsibility for civil defence was transferred to this Department late in the fiscal year under review, the account of civil defence activities has been included in the report of the Department of National Defence.

During the year the Department continued, on request of the Department of External Affairs, to assist the work of the United Nations and its specialized agencies and other international organizations in respect of health, welfare and social security matters and to carry out various international responsibilities resulting from different conventions in the health field to which Canada has been a signatory. Departmental officers represented Canada at a variety of United Nations meetings.

The considerable expansion and strengthening during the year of services provided by the Department was achieved despite economies made necessary because of the seriousness of international conditions. The progress that has been achieved was in large part made possible by the devotion and loyalty of departmental staff and their assumption of the heavy new responsibilities that have been an inevitable part of the growth of departmental work.

## HEALTH BRANCH

### INTRODUCTION

Since the formation of the Department of National Health and Welfare in 1944, co-operation with Provincial departments of health and other health agencies, in the extension and development of health activities throughout the country, has assumed an increasingly important place in the work of the Health Branch. The establishment of the National Health Program in 1948 through the granting of federal funds, to assist in specific fields of health activity, has greatly extended this work and the implementation of the grants has constituted a major activity of the Department since that date. The consultative service provided through the specialist divisions to provincial departments of health and other agencies, which was begun prior to 1944, has been continued and extended as an essential part of the program.

Extension of health services to Indians and Eskimos has resulted in substantial increase in the number of patients treated. During the year a new 200-bed hospital was opened at Moose Factory together with a number of health centres in areas where health aid had previously not been available.

A sharp increase during the year in the number of immigrants requiring medical examination abroad has necessitated an expansion of the Departments' overseas staff. Medical and hospital care of sick mariners has been slightly expanded and strengthened where necessary. There has been an increasing utilization of the health services available to civil servants and growing evidence not only of the benefits derived by the civil servant from this scheme, but, also of saving through increased efficiency and decreased loss of time. Civil aviation in Canada was aided through the establishment and supervision of physical standards for pilots and general advisory work in the field of civil aviation medicine.

Inspection and enforcement work carried on in the fields of food and drugs, narcotic control and public health engineering were continued with some extension in particular areas. New problems are continually arising in this work, calling for a substantial amount of investigation and applied research.

Support continued to be given to research on the characteristics and uses of ACTH and cortisone, with the co-operation of the provinces which have allocated a portion of their share of the General Public Health Grant for this purpose. Up to the end of the fiscal year about \$335,100 had been expended for this research. In addition, under the Public Health Research Grant, \$53,657 has been made available to the Connaught Medical Research Laboratories for research on methods of preparation of ACTH.

Prior to the responsibility for civil defence being transferred to the Department work had been commenced on the different health aspects of civil defence. Responsibility for this work has been retained by the Health Branch of the Department.

*Organization of the Health Branch.* The Health Branch is divided into four directorates: Health Services, which is composed of a number of divisions dealing with different aspects of public health; Health Insurance Studies, which administers the National Health Grants, with assistance from the specialist divisions of the Department, and directs departmental activity in health care planning; Indian Health Services, which administers the

federal program under which medical and hospital care is provided for Indians and Eskimos; and Food and Drugs, which is responsible for the administration of the Food and Drugs and Proprietary or Patent Medicine Acts.

The Directorate of Health Services is composed of fourteen divisions, each of which is charged with responsibilities in certain fields of public health work. These include: Blindness Control, Child and Maternal Health, Civil Aviation Medicine, Civil Service Health, Dental Health, Epidemiology, Hospital Design, Industrial Health, Mental Health, Narcotic Control, Nutrition, Public Health Engineering, Quarantine, Immigration Medical and Sick Mariners, and the Laboratory of Hygiene. During the year, the Venereal Disease and Tuberculosis Control Division was incorporated into the Epidemiology Division as a logical step in view of changing concepts and trends in public health work.

A number of services are provided to the Health Branch through the different divisions of the Administration Branch which includes the Information Services and Research Divisions, the Legal Adviser and Departmental Secretary, the Departmental Library and the Personnel and Purchasing and Supply Divisions.

*Health Branch Expenditure.* Expenditure by the Health Branch was \$33,215,833 during the year. In addition, a proportion of the \$792,335 expended on general departmental administration was for Health Branch activity. The largest single item of Health Branch expenditure was the \$18,874,786 paid to provincial health departments under the National Health Program. The second largest single item, \$10,285,668, was expended on health services for Indians and Eskimos.

Expenditure by divisions carrying on statutory functions was \$2,540,607: of this total, \$716,635 was expended under the Food and Drugs Act, \$26,330 under the Proprietary or Patent Medicine Act, \$165,737 under the Opium and Narcotic Drugs Acts, \$262,298 under the Quarantine Act and for services to lepers, \$686,112 under the Immigration Act, \$126,092 under the Public Works Health Act and other legislation and regulations relating to Public Health Engineering, and \$557,404 for treatment of sick mariners under Part V of the Canada Shipping Act. The specialist divisions providing advisory, co-ordinating and other assistance accounted for a further \$1,250,810 and an additional \$155,050 was expended on grants to national voluntary agencies engaged in health work. Health Branch administration costs were \$108,912.

Details as to Departmental Expenditure are contained in Table 4, on page 104.

*The Dominion Council of Health and Advisory Committees.* During the year the Dominion Council of Health, the principal advisory body to the Minister on health matters, which is composed of representatives from the provinces and different fields related to health work, under the chairmanship of the Deputy Minister of National Health, held its 58th meeting. The major questions receiving consideration were methods by which the continuing shortage of trained health personnel, and particularly nurses, could be alleviated and problems in connection with the administration of the National Health Program and the surveys of Provincial health facilities and the nation-wide morbidity survey being conducted under the program.

Meetings were also held and a number of important recommendations made by the Canadian Council on Nutrition and the Technical Advisory Committees on Mental Health, Public Health Laboratory Services and Public Health Engineering.

## II HEALTH IN CANADA

The health of the Canadian people has been influenced by the cumulative effect of many advances in medicine and public health during the first half of this century and further improvement should result from new methods of prevention, from research in the use of new drugs, from increased facilities for the care of the sick and from other advances in both health and welfare work. Some idea of the progress that has been made, and the problems that remain to be met, is given through data which has been provided by the Dominion Bureau of Statistics. More detailed knowledge of the extent of major health problems should begin to become available on conclusion of the Canadian Morbidity Survey which is described in Part IV.

During 1950 there were no epidemics of national importance. A relatively minor form of influenza, which appeared late in 1950, reached a peak in late February and early March of 1951. Certain localities, for the most part urban centres, were chiefly involved and, with the increasing incidence of the disease, appeared to suffer to a greater extent than others.<sup>1</sup> There was a significant increase in the total number of deaths during this period over corresponding months in previous years, with about seventy-five per cent of the increase, according to the Dominion Bureau of Statistics, being in the age groups over 55 years.

Other less widespread epidemics, such as an outbreak in Halifax, of infectious hepatitis, occurred in different sections of the country. Increased incidence of neonatal skin infections and puerperal breast abscesses appeared to continue in several large urban centres; in one city, in 1948, 14 per cent of confined mothers were affected, as compared with the usual average incidence of as low as 0.5 per cent of confinements.

Poliomyelitis, usually considered a summer disease that is gone with the first frost, followed an unusual pattern in Prince Edward Island, where the first case occurred during the week of September 9th, and cases were reported each week until the end of January, 1951. In all, 79 cases were reported, more than two and one-half times the previous five year annual average of 30 cases for the province.

### **Vital Statistics**

The population of Canada is estimated by the Dominion Bureau of Statistics to be just under 14 million at the present time and to have increased by about 2,000,000 persons during the ten years since 1941, with the average natural increase of about 230,000 being supplemented by a net immigration of from 50,000 to 75,000 persons each year. The rural to urban shift of population has continued since 1941, when 54 per cent of Canadians were living in urban centres.

The increase in population has been accompanied by increases in both the older and, because of high birth rates, the younger age groups. Canada, however, remains a relatively "young" nation. While the proportion of persons aged 50 years and over has increased about four per cent in the last 20 years, 37 per cent of today's population is under 20 and nearly 70 per cent under 40 years of age. Life expectancy has gradually increased as the hazards of infectious disease have been overcome and it is now estimated that boys and girls who survive their first year of life can, on the average, look forward to about 68 and 70 years of life respectively.

(1) Some indication of the attack rate is given by the fact that 59 per cent of the staff of the Department suffered varying degrees of illness from influenza during the period of its greatest intensity; in one industrial company in Ottawa where 300 persons were employed the incidence of illness was 36 per cent.

The birth rate in 1950 was 26.8 per 1000 population, as compared to 26.9 in 1949 and the post-war peak of 28.6 in 1947. Seventy-four per cent of babies were born in hospitals. The marriage rate declined to 9.0 per 1000 population from the 1946 peak of 10.9. At the same time the divorce rate increased to 37.7 per 100,000 of the population—a rate four times greater than that of 20 years ago, with the number of divorces being six times higher.

The general death rate which was 8.9 per 1000 in 1950, when 123,649 deaths occurred for all ages, has declined slightly over the past several years. In a general decline in mortality rates which is evident in most countries when rates for 1937 and 1948 are compared, Canada was one of nine countries where the decline, based on "age adjusted rates," was 20 per cent or more. In 1949 less than one third of all deaths in Canada were of persons under 50 years of age. Of these 43 per cent were under one year of age; 41 of every 1000 live births still failed to survive the first year of life.

### **Chief Causes of Death**

It is estimated that heart or arterial diseases and defects affect at least 800,000 Canadians. Arteriosclerotic and degenerative heart diseases easily take first place amongst the chief causes of death. They caused a total of 30,533 or 24.7 per cent of all deaths in 1950. Another 6.7 per cent of deaths were due to other conditions of the heart and arteries, such as chronic rheumatic heart, hypertension and heart disease. Vascular lesions of the nervous system accounted for a further 10.1 per cent. Thus cardiovascular disorders were responsible for 41.5 per cent of all deaths during the year.

Cancer of various types caused more than 17,000 deaths and over 14 per cent of total deaths. It has been estimated that some 250 cases occur each year for each 100,000 of the population and, on this basis, there would have been 35,000 cases in Canada during 1950. Some idea of the community case load can be derived from attendance at x-ray departments of public hospitals, where more than 67,000 persons were treated in 1947, over half of whom received x-ray therapy.

Birth injuries, asphyxia and atelectasis caused 2,651 deaths; infections of the newborn, 715; other diseases of early infancy, including prematurity, 4,227 and congenital malformations 2,236—a total of 9,874 or about eight per cent of all deaths. While infant mortality rates remained high, a new low was set for Canada in 1950 by British Columbia, where the rate was 30 per 1000 births.

Encouraging progress has been made in reducing maternal mortality; the rate has declined from 5.8 maternal deaths per 1000 live births in 1930 to 1.1 in 1950.

Accidental deaths rank first among the causes of death through school age to about age 40. During 1950, motor vehicle accidents took 2,261 lives and other accidents 5,277, a total of 6 per cent of all deaths.

The respiratory diseases killed a total of 6,107 Canadians and accounted for 5 per cent of all deaths in 1950. Pneumonia was responsible for 4,633 deaths, influenza for 940, and bronchitis for 534. While, taken together, the respiratory diseases still find a place among the chief causes of death their incidence has been rapidly declining since the introduction of the sulpha drugs and antibiotics. While it is not yet possible to say that they have been controlled, their complications have been greatly reduced, with consequent decrease in the number of resultant deaths. For almost all types of respiratory diseases, except pulmonary cancer, death rates were about twice as high six years ago as now; in 1937, before the use of chemotherapy and the antibiotics, they were more than four times as high.

The long term steady downward trend in tuberculosis mortality continued. In 1950, 3,582 or three per cent of all deaths in Canada resulted from tuberculosis. Although this disease remains a major cause of illness and death and is still far too prevalent in some areas of Canada, the over-all mortality rate has decreased from 87.7 per 100,000 population in 1921 to about 22 in 1950. Mass chest x-rays have suggested an average of one to two cases per 1,000 examined. A national case load in 1950 of about 36,000 sufferers seems a reasonable estimate.

Diabetes caused 1,545 deaths in 1950, or 1.2 per cent of total deaths, with the death rate being 11.2 per 100,000 population. However, recent surveys show total diabetic prevalence to be comparable to that in the U.S. or about 1.3 per cent of the population. The favourable life expectancy of sufferers from diabetes remains a tribute to insulin and its Canadian discoverers.

Deaths from infectious and parasitic diseases, other than tuberculosis, also continued to decline; they totalled 1,479 in 1950, or one per cent of total deaths. It should be noted however that in 1950 there were 421 cases of diphtheria reported in Canada and 49 deaths from this disease, in spite of the fact that preventive measures are available.

### **Major Illnesses**

A listing of some of the highlights of the incidence of sickness in Canada reveals both cause for encouragement and the need for further improvement.

In the last five years there has been a reduction of 82 per cent in cases of early syphilis and 46.5 per cent for other venereal diseases. In 1950, there were 22,220 cases of known disease or 160.8 per 100,000, a 13 per cent reduction from 1949. Known cases of gonorrhea decreased 8 per cent in the same period.

Poliomyelitis showed a 1950 incidence of 6.6 cases per 100,000 population, one third of whom were reported as paralytic. Rates for the previous three years, exclusive of Newfoundland, were 18.5, 9.1 and 18.2 respectively. It has been estimated that about 20,000 Canadians suffer some residual disability from this disease.

In regard to arthritis and rheumatism, which, it was estimated in 1947, affect some 625,000 persons over the age of 14, some improvement may become evident in the future as a result of the increasing availability of cortisone and ACTH.

Multiple sclerosis was the subject of considerable research during the year. A survey in the city of Winnipeg showed a local prevalence rate of 421 per 100,000—about four times that revealed in a companion survey carried out in New Orleans. Prevalence rates similar to that of Winnipeg have been discovered in two other Canadian cities. Since 1945 over 200 deaths have occurred annually from this disease.

One of the greatest health problems today is presented by mental illness. While it is difficult to assess the full extent of mental illness in the population various estimates have appeared which suggest that as high as 50 per cent of illness may be attributable to this cause.

Many more facts and figures could be quoted. For instance, it is estimated that there are 18,000 blind persons in Canada and over 100,000 who are deaf or hard of hearing—but what has been given perhaps indicates some of the highlights of a picture which, while still requiring improvement is generally very favourable when compared to any period in the past or to most other countries today.

### **Indian Health**

Special mention should be made of progress achieved in raising the health level of Canada's Indian population.

According to a special census taken in 1949 the number of Indians in Canada was 136,047. Birth rates are high, as shown by the 1949 rate of 43.9 per 1000 population. The death rate still remains high and in 1949 was 19.6 as compared to 9.2 for the whole population. This unfavourable figure is reflected in infant mortality rates; in 1949 there were 146 deaths for each 1,000 live births, compared to the over-all rate of 43.

The greatest threat to Indian and Eskimo health remained tuberculosis. In 1949 the death rate was 399.6 per 100,000, as opposed to 26.7 for the whole population. The progress that has been made, however, is evident when this rate is considered in relation to the 549.8 of 1947 and the 480.1 of 1948. Case incidence seems to be improving as mass x-ray surveys in 1946 showed a rate of 3.28 and in 1950 a rate of 1.53 for every 100 persons exrayed. Mass B.C.G. vaccination campaigns now underway may be expected to show some impact on tuberculosis.

### **III**

#### **INTERNATIONAL HEALTH ACTIVITIES**

An important part of the Department's work arises from obligations incurred in connection with contractual agreements between Canada and other countries on matters related to health, and with Canada's membership in international organizations concerned with health work.

Canada has been a signatory to a number of international agreements and conventions specifically relating to health. To carry out this country's obligations under the International Sanitary Conventions, the Department maintains quarantine measures for ships and aircraft entering Canadian ports and provides accommodation and necessary medical care for persons arriving in Canada who require to be quarantined. In addition, it carries out Canada's obligations, under the Brussels Agreement of 1924, for the provision of treatment for venereal disease in seafarers arriving in this country. The Department is also responsible for the enforcement of requirements governing the handling and shipping of shellfish, under the International Shellfish Agreement between Canada and the United States, and, at the request of the International Joint Commission, participates in studies connected with control of pollution of boundary waters between Canada and the United States and with problems caused by atmospheric pollution.

Other international health responsibilities carried out by the Department include the custody and distribution of biological, vitamin and hormone standards for the World Health Organization, certain duties in connection with the Commission on Narcotic Drugs of the United Nations and the provision of assistance to a number of the specialized agencies carrying out programs having aspects relating to health, including the International Civil Aviation Organization and the International Refugee Organization.

In addition to Canada's contribution toward the expenses of the World Health Organization substantial financial contributions were made to the United Nations Technical Assistance Fund and to the International children's Emergency Fund.

*World Health Organization.* In 1946 Canada was the third country to ratify the constitution of the World Health Organization and, until the organization was formally established in 1948, served as a member nation on the 18-member Interim Commission which worked out the details of its organization.

At meetings of the World Health Assembly, the Organization's main governing body, on which all member states are represented, Canadian delegations have supported a policy of gradual and orderly development of international health activities, and have emphasized the importance of establishing priorities and designing programs to meet the most urgent of world health problems in a manner which will encourage and sustain maximum local effort. Canadian delegations to the annual meetings of the Assembly have included provincial as well as federal health officials and in addition distinguished authorities outside the government service.

*International Medical Congresses.* During the year more than 30 invitations were extended to the Department to be represented at international congresses dealing with various medical and related sciences. As the Department regards these meetings as valuable primarily for the opportunity they provide for leading clinical and research scientists in different countries to meet and exchange information, invitations are generally referred to appropriate professional or other organizations or to individuals, with a view to securing effective representation in each case. In a few instances, where members of the Department can make special contributions or where attendance would be particularly valuable to the Department's work, departmental officials attended. During the year officers of the Department attended the Mid-century White House Conference on Children and Youth; the third Assembly of the World Federation of Mental Health, the second International Congress on Criminology, and the International Congress of Psychiatrists, all held in Paris in September 1950; the Sixth International Conference on Radiology; the annual meeting of the Pan-American Association of Ophthalmology; and the Symposium held in Washington, on Current Progress and Study of Venereal Disease.

#### IV

#### ASSISTANCE AND PLANNING SERVICES

The provision of assistance and guidance to the many agencies engaged in health activity in Canada has become an increasingly important part of the work of the Department. Through the provision of financial aid and expert technical assistance, the Department comes into direct relation with almost every part of the nation-wide system of health services administered by provincial and municipal departments of health. In a similar way very close relationships exist between the Department and many of the national voluntary health agencies. To supplement this work a program is maintained in the field of health education, with informational material being prepared as requested by the provinces and made available for distribution through provincial departments of health. The Department has also contributed substantially to research carried on in the socio-economic aspects of health matters.

#### THE NATIONAL HEALTH PROGRAM

The National Health Program, under which annual federal grants are made to the provinces to strengthen and extend health and hospital services and to lay the foundations for health insurance, has three basic purposes: to assist the provinces in surveying their health facilities and services, to aid with the cost of new hospital construction over a period of years and, through annual grants, to improve and strengthen provincial services in the various health fields. The different grants which constitute the program, which is administered by the Directorate of Health Insurance Studies, and the conditions under which each is made available, are shown in Table 1, pages 23 and 24.

**TABLE 1**  
**CONDITIONS GOVERNING FEDERAL GRANTS AVAILABLE TO PROVINCES UNDER THE NATIONAL HEALTH PROGRAM, 1950-51(a)**

GRANT	Health Survey	General Public Health	Tuberculosis	Mental Health	Venereal Disease	Crippled Children
Purpose of Grant	Survey of Provincial health resources to determine existing needs and priority with which they should be met and to assist planning of an integrated program of development and extension.	Strengthening and extending provincial and local health services, including training of personnel and conduct of surveys and studies.	Prevention and treatment of tuberculosis, including rehabilitation and extension of free treatment, training of personnel and conduct of surveys and studies.	Prevention and treatment of mental illness, including rehabilitation, extension of free treatment, training of personnel and conduct of surveys and studies.	Prevention and treatment of venereal disease, including rehabilitation, training of personnel and conduct of surveys and studies.	Prevention and treatment of crippling conditions in children, including rehabilitation and training, training of personnel and conduct of surveys and studies.
Basis of Allocation to Provinces	\$5000 to each province with the balance being allocated on the basis of population, subject to no province receiving less than \$15,000.	45 cents per capita (b)	\$25,000 to each province with balance allocated 50 percent on basis of population and 50 per cent on basis of average number of deaths from tuberculosis in each province in previous five years.	\$25,000 to each province with balance allocated on basis of population.	\$4,000 to each province with balance allocated on basis of population.	\$4,000 to each province with balance allocated on basis of population.
Matching Conditions	Nil	Nil	Nil	Nil	50-50 basis.	Nil
Remarks	Non-recurring grant totaling \$625,000 first made available in 1948. Additional \$20,180 to Newfoundland brought grant total to \$645,180. Unexpended portion in any year has been made available in the next.	Grant commenced at rate of 35 cents per capita and increases 5 cents per capita annually to a maximum of 50 cents per capita.	Grant was increased by \$1,049,386 at the commencement of the third year of the program.	Grant is increased by \$1,033,929 at the beginning of the third, fifth and seventh years of the program.		

(a) As from 1951-52 a province may, under certain conditions and without exceeding its total allotment, utilize any unexpended funds from one grant to supplement another that has been fully expended.

(b) Increased to maximum of 50 cents per capita in 1951-52.

TABLE 1 (Contd.)

CONDITIONS UNDER WHICH FEDERAL GRANTS WERE MADE AVAILABLE TO PROVINCES UNDER THE NATIONAL HEALTH PROGRAM, 1950-51

GRANT	Cancer	Professional Training	Public Health Research	Hospital Construction
Purpose of Grant	Detection and treatment of cancer, including diagnosis, treatment and rehabilitation; training of personnel and conduct of surveys and studies.	Training of health and hospital personnel.	Stimulation and development of public health research.	Provision of adequate accommodation for hospital and health services.
Basis of Allocation to Provinces	Allocated on basis of population.	\$4,000 to each province with balance allocated on basis of population.	As approved by the Minister, on recommendation of the Dominion Council of Health.	Allocated to provinces on basis of population. Allocated to hospitals: \$1,000 per bed for active treatment beds; \$1,500 per bed for chronic or convalescent beds; \$1,000 for 3 bassinets each contained in a separate cubicle; \$1,000 for each 300 square feet of space in a community health centre, subject to prescribed maximum limits on amount of space for which grant may be utilized.(c)
Matching Conditions	50-50 basis.	Nil	Nil	Provinces to match or exceed federal contribution, which in no case shall exceed one third of total cost.
Remarks		Grant is used generally for the training of hospital personnel; personnel in other health fields are trained under other grants. Two or more provinces may combine in a training project.	Grant commenced at \$100,000 and increases annually until maximum of \$512,900 is reached. Two or more provinces may combine in a research project.	Grant was commenced with the intention that its progress be reviewed at the end of five years, with a view to any adjustment in the program found to be required at that time.

(c) For 1951-52 the grant was also made available on the basis of \$500 per bed for living quarters for nurses and, subject to prescribed maximum limits on amount of space for which grant may be utilized, \$1,000 for each 300 square feet of space in a laboratory.

The grants have been utilized for the development of all aspects of provincial health programs. In all provinces surveys of existing health facilities and services have been made possible, so that gaps might be uncovered and future progress charted. By the end of the fiscal year federal aid had assisted in the construction of 28,355 new hospital beds, over half the objective aimed for during the first five years of the program. Some 3,700 health workers have received special training and 3,400 workers have been employed through the grants to strengthen provincial health departments, institutional staffs, hospitals and local health services. Provincial and municipal health facilities have been aided by the purchase of additional technical equipment and the extension of both preventive and treatment services and a significant increase in health research has been made possible.

During the three years that the program has been in existence the provinces have steadily increased their utilization of the amounts made available through the grants. While the most difficult obstacle to full utilization, apart from rising costs, has been shortage of trained staff, the number of persons for whom training has been made available through the program has contributed substantially toward reducing this problem. The progressive increase in the use of grant funds is illustrated by the fact that while in the first year of the program the provinces were able to utilize only 25.8 per cent of the funds available under all grants (excluding the Health Survey Grant) this percentage rose to 47.3 in 1949-50 and to 53.1 in 1950-51. Further substantial increases are contemplated as a result of the completion of training courses now being carried on with aid from the grants and through the increased flexibility which it has been possible to introduce, as the program has progressed, into the conditions under which the grants are paid. The amounts made available to the provinces in 1950-51, the amounts allocated for approved projects and the amounts actually expended during the year are shown in Table 2, page 26.

Although the extension of preventive work has been evident in all provinces, together with an increasing interest in such projects as the development of Community Health Centres, most of the extension and increase of activity has been marked by a considerable variation between provinces in the manner in which development has taken place, because of differing needs and different provincial administrative methods. This variation has afforded an opportunity to study and assess the different ways in which the grants have been used. Equally important opportunities for study are afforded by the different pioneering projects being carried on, which, while established to meet problems that were particularly pressing in particular provinces, provide extremely useful experience for study and adaptation by other provinces. Special mention is made here of a number of these projects, which are considered to be of interest because of the influence they may be expected to exert on future health planning.

Table 2

AMOUNTS ALLOCATED TO, APPROVED FOR EXPENDITURE  
AND EXPENDED BY, PROVINCES UNDER FEDERAL GRANTS  
OF THE NATIONAL HEALTH PROGRAM, 1950-51

GRANT	A M O U N T		
	Available for Allocation to Provinces	Approved for Expenditure by the Provinces	Expended by the Provinces
	\$	\$	\$
General Public Health	6,086,300 <sup>(a)</sup>	3,966,412	2,907,730
Tuberculosis	4,226,000	3,854,849	3,166,166
Mental Health	5,156,100	3,422,301	2,644,827
Venereal Disease	516,300	516,199	484,165
Crippled Children	516,300	377,712	243,503
Cancer	3,592,600	1,766,018	1,693,106
Professional Training	516,300	509,056	452,853
Public Health Research	308,000 <sup>(b)</sup>	275,655	231,234
Hospital Construction	14,343,800 <sup>(c)</sup>	12,640,315	6,897,353
Total	35,261,700 <sup>(d)</sup>	27,328,517	18,720,936
Health Survey (revote)	365,663 <sup>(e)</sup>	300,259	153,850
Grand Total	35,627,363	27,628,776	18,874,786

(a) \$6,910,500 in 1951-52

(b) \$410,700 in 1951-52

(c) Including \$1,000,000 revoted from previous year.

(d) \$35,188,600 in 1951-52

(e) \$645,180 originally voted, less expenditures to March 31, 1950

In Newfoundland, for instance, the extension and improvement, through the grants, of the completely combined public health and medical services which had for some years been provided throughout most of the province by the provincial Department of Public Health has assisted the development of a program which is of considerable interest to other provinces, particularly those in which health care must be supplied for sparsely settled areas. Similarly, the development in Prince Edward Island of a combined laboratory service, operated by the provincial department of health through the hospitals and providing both public health laboratory service and hospital diagnostic procedures, is a project that will be closely watched.

A significant project, though a small one, being carried out by the Herbert Reddy Memorial Hospital in Montreal, is designed to ascertain the advantages of the hospital providing supervision in the patient's own home, as opposed to actual accommodation in the hospital. Studies such as this might conceivably point to a greater economy in the use of hospital accommodation in Canada.

In the essential work of training health personnel a number of extremely interesting projects are being carried on. One of the most important has been the successful program established in 1948-49 at Dalhousie University, under which the four Atlantic provinces co-operate in the training of psychiatrists, psychiatric social workers and public health nurses.

In the field of mental health, assistance has been given to the new Crease Clinic at Essondale, British Columbia, for the investigation and intensive psychiatric treatment of mental patients, one of the outstanding developments in mental health work on the continent. As a part of the over-all social study being carried on in Digby county in Nova Scotia mental health clinical services are being developed by the province, through the aid of the Mental Health Grant. In addition to the important information as to the effect of environment on mental breakdown that, it is expected, will be derived from the study, the province will be provided with an exceptionally well established clinic. Another interesting development has been the provision of occupational and recreational facilities in provincial mental hospitals. The programs being developed by the Rehabilitation Department of the British Columbia Mental Health Services and the Provincial Mental Hospital in London, Ontario, under which rehabilitation services are provided for discharged mental patients, are also of great interest.

Another extremely important project has been the child health centre established to provide complete health services for all children in the Greater Vancouver Metropolitan Health District, which will also be available to aid children from other parts of the Province.

Assistance has also been given to the two experiments being carried on in Ontario to ascertain whether courses for nurses might be shortened so that greater numbers may be trained with available facilities. The 26-month course at Metropolitan Hospital in Windsor has now been in operation long enough so that some evaluation is becoming possible of the results obtained. The revised three-year training course at the Toronto Western Hospital, where all academic work is concentrated in the first two years, followed by a year as a nurse intern, so that full-time nursing service is provided after a two year training period, is another project of great potential interest.

Finally, experience gained in the attempt in Saskatchewan to provide dental care for children in rural areas, using the health region as the basis for service, should be of great interest to other provinces in planning how best to provide comprehensive dental services for children.

These projects represent, of course, only a very limited number of the total being carried on under the program, a total which is too large to list in detail in this report. Mention of representative projects is made however in the following pages, under the different health services of which they are a part.

### **General Health Services**

In addition to its work in specific health fields the Department carries on an active program designed to assist the development of the general administration of health and hospital services. Grants are made to a number of national voluntary agencies providing generalized programs, such as the Red Cross Society, the Victorian Order of Nurses and the Health League of Canada. In addition the General Public Health Grant is used for such projects as the building up of provincial health organizations and local services as well as to assist programs in various special fields, as described in other parts of this report.

Administrative services have been aided in a number of different ways; perhaps the most important has been the assistance given to the building up of staffs and the provision of facilities in all provinces. Medical health officers, public health nurses, administrators, clerical workers—all types of administrative staff—have been employed through the grant. In Quebec, for example, the total number of health workers has been increased by over 21 per cent since the commencement of the program and such projects as the health inspection service established on the west coast of Newfoundland have been made possible.

Health planning has been materially assisted in many provinces. New Brunswick has established a Health Planning Services Division, Prince Edward Island a Health Planning Commission. In Saskatchewan the Health Planning Services Division is aided by the grant. In Saskatchewan and other provinces vital and hospital statistics and other statistical services have been enlarged and extended with grant aid.

In all provinces hospitals have been assisted through the purchase of equipment and the employment of staff. Other aids to hospital administration range all the way from the organization of a Division of Hospitals in New Brunswick to the appointment in Newfoundland of a medical officer trained in public health to assist cottage hospital doctors.

Municipal doctor and hospital plans have been aided. In Saskatchewan, the number of communities providing doctors' services on a co-operative basis has been increased to more than one hundred and a supervisor of municipal doctor plans has been appointed to co-ordinate and standardize the program. The same trend has been evident in other prairie provinces.

In the strengthening of local health activity there has been significant progress in the establishment and building up of health units and in providing services to areas where care was formerly not available, as on the south coast of Newfoundland. With the aid of the grant, the provinces have greatly increased the number of, and expanded the services provided by health units.

In the over-all development of local health facilities very considerable attention has been paid in all provinces to the establishment and extension of laboratories and diagnostic units. In Manitoba particularly emphasis has been placed on this work and laboratory and x-ray services have been extended through the provinces' diagnostic units by assistance in procuring additional staff and equipment.

This brief mention of different ways in which the basic framework of health services in the provinces has been built up with assistance from the grant makes no pretense of being all inclusive, or of including mention of all ways in which aid has been provided. It does, though, give some idea of the variety of manners in which generalized services have been developed to complement the expansion of programs in the different health fields that are described in the following pages.

### ***Child and Maternal Health and Crippled Children***

Technical assistance in the fields of child and maternal health and crippled children is provided through the Child and Maternal Health Division in co-operation with a number of other divisions of the Department. Financial aid to provincial programs is made available through different grants of the National Health Program. Educational work is carried on through the production of films, radio scripts, pamphlets, articles for publication and other media. The Department acts in a liaison capacity with the World Health Organization and as a clearing house for information for the national voluntary agencies, educational centres, medical schools and other organizations active in child and maternal health work.

*Grants for Child and Maternal Health Work.* — Substantial aid has been given to child and maternal work under the National Health Program. During the year support was continued, through the General Public Health Grant, for a number of activities previously commenced, and for a number of new projects. The grant is used in child and maternal health work by different provinces principally for the establishment and support of child and maternal health divisions and services, the training of staff, the expansion of school health services, the purchase of equipment and the carrying on of research.

The child and maternal health divisions previously established in Saskatchewan and New Brunswick continued to receive aid and a division was established in Quebec city. In Quebec, assistance was given to the establishment of a pilot clinic for pre-natal and post-natal care at l'Hopital Ste. Justine and a complete program for the immunization by BCG of all newborn infants has been commenced. Manitoba and Alberta completed the furnishing of all hospitals in the province with incubators.

Federal assistance has made possible the strengthening of school health services in every province. In Quebec, school health services in many areas have been assisted by the provision of special equipment and by the addition of staff. Aid was continued to the special child health program in seven schools under the jurisdiction of the School Board at Lachine, and medical examinations of approximately 1,700 pupils are now carried out at periodic intervals. In Ontario, physicians have been employed by various health units, to carry out medical examination of pre-school and school children. A preventive Orthodontia service is operated in Toronto, under the direction of the Department of Public Health, to provide orthodontic examination, education and simpler forms of corrective dental service for school children. In six provinces, audiometric tests were provided to locate children who are handicapped by defective hearing, so that corrective steps may be taken where indicated.

A number of research projects are also being carried out. British Columbia has been assisted in a project designed to evaluate the use of the Wetzel grid in relating the physical development of children to the state of their health. Other research includes studies of the effect of early rising after childbirth and of possible factors accounting for mis-

carriage, of nutritional abnormalities in pregnancy, of staphylococcal infection of mothers and infants and of the clinical use of "haptens" in the prevention of disease in newborn infants.

*Grants for Crippled Children's Work.* — With the aid of the Crippled Children Grant, all provinces are intensifying programs for the prevention and correction of disabling conditions in children and for the training of disabled children, through the building up of modern diagnostic services, and evaluation, treatment and rehabilitation facilities for children who are disabled by accident, disease or inherited defect. The principle governing administration of the grant is that every disabled child should be given the complete care that is necessary to cure his disabling condition or to alleviate it so far as possible.

Though the pattern of development has not been the same in all provinces and some provinces have concentrated on building up government services, others on the provision of assistance through voluntary agencies, the grant has been used for the rounding out and development of the programs which existed in different provinces prior to its commencement and for the establishment of entirely new programs. In most provinces emphasis has been placed on the setting up of registries for crippled children and the development of systematic programs of diagnosis, treatment and rehabilitation. In many, special attention has been paid to cerebral palsy.

In Manitoba, the grant has been used for the development of a program for the location, registration and treatment for disabled children. In addition, a teaching program is being developed and operated at the Children's Hospital, Winnipeg. In Saskatchewan, assistance has been given to a section within the Division of Child Health to provide services for crippled children, which include a register of all crippled children in the province and a systematic program of diagnosis, treatment and rehabilitation. The grants have helped defray the operating costs of the Cerebral Palsy Rehabilitation Centre in the Red Cross Hospital, Regina, and a mobile consultation unit has been established to care for crippled children in the smaller centres of the province. Professional training has been provided and in Regina, a brace shop has been established to make orthopaedic appliances. A central registry to record all children in British Columbia suffering from crippling diseases has been established with the aid of the grant, as a basic step in the provincial program for crippled children. Staff and orthopaedic equipment have been provided to the Health Centre for Children in Vancouver, and for the care of children, to the Western Society for Physical Rehabilitation.

In some provinces substantial aid has been given to the Crippled children's Societies and the Red Cross for the provision of services on a province wide basis. In Prince Edward Island, federal funds have been allocated to the Canadian Red Cross Society for the carrying on of a treatment and rehabilitation program. In New Brunswick, the Junior Red Cross has been assisted in the provision of free treatment for crippled children, including hospital costs, fees to surgeons and anaesthetists, and the purchase of corrective and therapeutic appliances and equipment. The Ontario Society for Crippled Children has been aided in expanding its various nursing districts and for the extension of services to northern centres of the province. In Quebec, the provincial Society for Crippled Children and the Rehabilitation Society for Cripples have been assisted in the employment of essential new staff and for necessary equipment.

In most provinces existing facilities have been bolstered by the purchase of equipment and the employment of staff. In Newfoundland, equipment has been purchased for the orthopaedic wing of the General Hospital in St. John's and staff have been employed for work with crippled children. In Nova Scotia, respirators have been purchased for the province's polio clinic and equipment to improve teaching methods in the Children's Hospital in Halifax. The Ecole Cardinal-Villeneuve in Quebec city has been assisted by the employment of staff, and the provision of ambulance and other equipment for transportation of crippled children to and from treatment centres. Orthopaedic appliances have been purchased for different crippled children's programs, and assistance has been given for the extension of services by the Speech Therapy Clinic at the Royal Victoria Hospital.

Some provinces have utilized grant funds for the organization of programs against specific disabling conditions. Alberta is establishing a program providing treatment, appliances and rehabilitation for crippled children not covered by the Alberta Poliomyelitis Sufferers' Act and funds have been provided for an experimental diagnostic and treatment service for persons under 21 years of age suffering from rheumatoid arthritis. Assistance has also been given to the establishment of a Cerebral Palsy diagnostic and treatment clinic at Edmonton.

In Ontario, financial assistance has been given to the setting up of the Woodedden Hospital Training School for children suffering from cerebral palsy operated by the Ontario Society for Crippled Children, and provision has been made for similar training at a day clinic in Chatham. At the Cerebral Palsy Training School and Clinic in Toronto, staff has been employed and additional equipment has been purchased through the grant, and assistance has been given toward the payment of consultants' fees. A survey of crippling conditions in children is being conducted in Toronto with the assistance of the grant and studies are being carried out on the incidence and causes of harelip and cleft palate.

*Educational and Information Services.* In the production and distribution of educational material the Department maintains close co-operation with the provinces, with particular attention being paid to preparing material designed to meet provincial needs. The *Canadian Mother and Child* continued to be distributed on request, at the rate of about 10,000 copies a month, a number closely corresponding to the number of first births registered annually in Canada. The book, which is intended primarily for use in outlying districts where medical care is not readily available, is constantly being revised to meet new concepts of the care which mothers and children should receive. *Up the Years from One to Six*, which was published during the year, was prepared through the collaboration of departmental specialists in pediatrics, psychiatry, nutrition, dental health, blindness and physical fitness as well as non-government experts. Dealing with the physical characteristics and behaviour of pre-school children, it has been well received and the first edition of 55,000 copies fell far short of the demand. A companion volume *Up the Years from Six to Twelve* is now in course of preparation. The film *Mother and Child*, and the fifteen minute filmstrips *Nine to Get Ready* and *Introducing Baby* have continued to be widely used. Columbia University has requested permission to adapt the former for showing in the United States.

The various folders and other informational material provided by the Department have continued to be circulated. This material which is revised from time to time to meet new developments in the various fields of care includes folders on *Whooping Cough* and *Poliomyelitis*, of which 60,000 and 47,000 copies respectively were distributed during the year:

the card *Daily Diet for Mothers*, which is intended as a reminder concerning the main essentials of diet for expectant and nursing mothers, of which 58,000 copies were distributed; and the folder *Ten Points to Remember*, which is intended for distribution at showings of the film *Mother and Child* and film strips. In addition to this work, addresses and lectures were given to different groups and articles were prepared for publication in *Canada's Health and Welfare* and other journals. During the year articles on whooping cough and breast feeding appeared in the departmental publication.

*Research and Assistance Projects.* The Department continued to assist in the Wetzel Grid Study, carried out by the British Columbia Department of Health, of 8,000 school children in the Central Vancouver Island Health Unit. The study, which will help to determine the usefulness of the Wetzel Grid in assessing the growth and development of children, has been carried on over a period of two years with assistance from federal grants, and the final report is in course of preparation. The Department has also participated in research on prematurity, carried out in Vancouver, under which information, including all factors which may have affected premature births, is being collected in respect to births in four Vancouver hospitals. A report covering this research was presented at the annual meeting of the Canadian Public Health Association in Toronto.

Considerable assistance was also given by the Child and Maternal Health Division to the British Columbia Department of Health in the organization of a program for premature babies and to that of Saskatchewan in the development of the program of the new Child Health Division.

### **Epidemiology**

The term epidemiology is used by the Department in its broadest sense, to include critical evaluation of problems in the field of communicable and chronic disease and the implementation of programs for prevention and control.

Departmental epidemiological activity, which is centred in the Epidemiology division, includes the provision of planning, leadership in and co-ordination of epidemiological programs in Canada and the rendering of assistance to provincial health departments as required in the event of epidemics of unusual size or importance. Continuous investigation and assessment of new methods for the prevention and control of disease are carried on. In the conduct of laboratory and field studies the division acts in conjunction with the Laboratory of Hygiene or other government or non-government agencies, to determine the incidence and prevalence of disease or other significant information related to disease problems. Collaboration is maintained with the Dominion Bureau of Statistics in improvement of morbidity and mortality reporting and co-operation extended to the World Health Organization and other countries in the development of international programs and the exchange of epidemiological information.

Considerable assistance has been given to provincial epidemiology programs through the General Public Health, Public Health Research and other grants of the National Health Program. There has been great variation in the types of projects receiving assistance. Some, which might be considered as representative are listed here.

With the assistance of the General Public Health Grant, a Division of Communicable Disease Control has been established in the New Brunswick Department of Public Health, and, under the Public Health Research Grant, a number of research projects have been carried out in different provinces.

In Quebec, a study is being made of the epidemiology of virus diseases, of neurotropic viruses and of the history of histoplasmosis. Saskatchewan is being assisted in a survey of disseminated sclerosis being carried on in the southern part of the province and Alberta in a study of systemic fungi of the province and in an aerobiological survey of pollen and mold spores.

Aid is being given to a number of epidemiological studies being carried on in Ontario, including survey to determine the incidence of diabetes, the incidence and distribution of Cercarial Dermatitis and the incidence of diphtheria carriers among school children. Other projects in the province receiving assistance include: epidemiological studies of trichinosis; aetiological studies, including a study of rheumatic fever and rheumatoid arthritis; a study of non-bacterial pneumonias in infants, to determine the proportion of respiratory infections which may be due to viral agents; and a survey of clinical ocular diseases of virus aetiology. A study is being made of the role of sewage and water supplies in the spread of poliomyelitis and a brucellosis survey is being carried on in Brant County. In the sickness survey of families in East York—Leaside, carried out by the local health unit during the last two years with assistance from the Public Health Grant, and completed on March 31, 1951, technical assistance services continued to be provided by the Epidemiology division.

Major projects of the Epidemiology division during the year included participation with the Directorate of Health Insurance Studies, the Research Division, the Dominion Bureau of Statistics and provincial health departments in the development of the Canadian Sickness Survey and of the supplementary survey of permanent disability carried out in conjunction with it. The division played an important part in the rendering of epidemic aid assistance to the provinces and in the carrying out of field studies. The division acts as a centre for the dissemination of epidemiological information in answering current requests. During the course of widespread epidemics, such as the influenza epidemic of the past winter, the division worked in conjunction with the Influenza Centre established in the Laboratory of Hygiene.

Assistance was given to the Manitoba Department of Health and Public Welfare, in November 1950, in response to a request that an epidemiological study be carried out of an epidemic in Winnipeg of *Staphylococcus Aureus Hemolyticus* infection causing pustules in newborn infants and infected breasts in mothers. The epidemic had run a fluctuating course in most city hospitals since the fall of 1948 and, at its peak, incidence of breast infections involved as many as 10-15 per cent of mothers confined in Winnipeg hospitals. Infection was first thought to be caused by one strain of *staphylococcus Aureus*, but later evidence appeared to indicate association with more than one strain. Improvements in nursing techniques and nursery conditions seem to have played a major part in reducing pustular infections of infants. Aureomycin, used prophylactically was found to be an effective treatment for breast and infant infections for a period of about one year. However, resistance eventually developed to it and chloromycetin was effectively substituted. Although periods of normal levels of incidence, about 0.5 per cent of confinements, have occurred in Winnipeg hospitals, these infections are still running a fluctuating course. A project has been approved, under the Public Health Research Grant for a special study of the epidemiology of this infection.

### **Mental Health**

Administration of the Mental Health Grant, the carrying on of an active education program, the provision of consultant services to other federal departments and of advisory and co-ordinating services for provincial health departments and other mental health agencies, are the principal aspects of the Department's mental health program.

*Grants.* The Mental Health Grant has been used by the provinces largely to provide additional staff for mental hospitals, mental health clinics and psychiatric wards in general hospitals; for the purchase of equipment; for the training of mental health workers; and for research in the field of mental health. The provinces contributed a portion of their grant funds for the production, by the National Film Board, of a public education film on mental hospital work.

In all provinces much progress has been made in the development of preventive services. Prince Edward Island and New Brunswick are organizing divisions of mental health which will operate mental health clinics along with other services. In Newfoundland the activities of the mental health clinic attached to the St. John's General Hospital have been expanded and the whole service strengthened by the addition of a psychiatrist to the staff of the hospital for nervous and mental diseases. In Nova Scotia, two field psychiatric clinics have been established, based at Sydney and Yarmouth, to provide a consultative service to physicians, and assistance to schools, courts, welfare agencies and institutions. Another clinic is being established, with the aid of the grant, in the north-western area of the province, to undertake research in preventive psychiatry as well as to provide usual mental health clinic services. In addition, a staff of psychologists has been employed, through the grant, to assist the various mental institutions and provide assistance in the public schools, with special emphasis on the proper treatment and testing of sub-normal children and children with behaviour problems.

The grant has been utilized to set up mental health clinics in many areas of Quebec and Ontario. In Quebec, assistance was given to various voluntary agencies, to child guidance clinics at Laval University, the University of Montreal and at Three Rivers and Sherbrooke. A clinic for discharged adult prisoners and juvenile delinquents is being organized in the Quebec City area.

In Ontario, clinics have been set up to serve York township and the municipalities of Windsor and Sudbury, and services in Hamilton, London and Toronto have been extended with grant funds. In Manitoba, two child guidance clinics were organized. Saskatchewan used the grant to strengthen the staffs of existing mental health clinics in various areas; a new clinic was established in Saskatoon and five teacher-psychologists were employed for the school mental health program. In Alberta, a clinic was established for adults as well as children. A preventive mental health program was commenced in the Victoria area of British Columbia and three child guidance clinics in other areas of the province, including one travelling unit, were assisted.

With the assistance of the grant, outpatient psychiatric clinics were set up at the general hospitals in St. John's, Halifax, and Saint John. Quebec is establishing psychiatric clinics in six hospitals in the Quebec city area and in seven in the Montreal area. In Ontario and the prairie provinces psychiatric outpatient services are being expanded. Outpatient clinics for epileptics in Quebec and Montreal are being extended. In British Columbia an outpatient clinic for epileptics is being established at the Vancouver General Hospital.

A number of provinces employed the grant to improve services for the mentally retarded. In Nova Scotia it was used to staff and equip an extension of the hospital for mental defectives. Quebec, Manitoba, Saskatchewan, and Alberta enlarged and improved services for mental defectives through increases of staff and purchases of equipment. In Ontario, a pilot plant training centre for mentally retarded children has been established in Toronto.

In every province large amounts have been spent on the purchase of special technical equipment required for newly-developed diagnostic and treatment services, including electroencephalographs for the diagnosis of organic brain disorders, apparatus for shock therapy and equipment for lobotomy and leucotomy. Comprehensive programs of occupational and recreational therapy have been developed in the mental hospitals of several provinces. One of the largest single projects in institutional care has been the development of the Crease Clinic of Psychological Medicine at Esson-dale.

British Columbia has undertaken a post-discharge rehabilitation service. During the year a rehabilitation officer was appointed to provide guidance and employment services for patients discharged from the Esson-dale Mental Hospital. The organization on a demonstration basis of an after-care department at the Ontario Hospital, London, Ontario, to assist with the post-convalescence and rehabilitation of mentally ill persons was another major development during the year.

A widespread program of research and investigation in various fields of mental health is being carried on, with the aid of the grant, at various Canadian universities and institutes. It includes laboratory studies dealing with organic factors in mental illness, clinical studies concerned with the psychiatric aspects of specific illnesses, socio-economic research into social factors, and psychological projects such as the standardization of intelligence tests.

*Advisory and Consultant Services.* At its annual meeting in January 1951 the Advisory Committee on Mental Health, which consists of representatives of the Department and of the medical schools and the directors of provincial mental health services, recommended that five per cent of the Mental Health Grant be centrally allocated for the support of research in the mental health field and that action be taken by the National Research Council, the Defence Research Board and the Department of Veterans Affairs to delineate clearly the various aspects of the field of mental health research which each undertakes to support; that consultants in the fields of nursing, social work, and rehabilitation be appointed to the staff of the Mental Health Division; that a statement of minimal training for attendants and nurses be prepared by the Department to permit uniform certification throughout Canada; and that the Department sponsor a film on the psychiatric aspects of the problem of chronic alcoholism.

At an interdepartmental meeting to consider the problem of psychiatric research, called by the Department in June 1950 and attended by representatives of the Departments of National Health and Welfare, Justice, Citizenship and Immigration, Labour and Veterans Affairs and the National Research Council and Defence Research Board, the possibilities of federal support of a major institute for research into mental disease were explored.

The consultant service on mental health problems provided by the Division of Mental Health to the Narcotic Control and other Divisions was continued.

*Information Services.* Child training pamphlets produced by the Department continue to be popular with public health personnel and social workers, as well as parents. The production of two new pamphlets, on *Shyness*, and *Baby Talk*, brought to twelve the total of those now published in this series. A new series on the *School Age Child* was instituted in 1950, with one pamphlet, *Preparing Your Child for School*, being published.

The fourth film of the Mental Mechanisms Series, *Feelings of Depression*, was released early in 1950. With the three previously produced, *Over-dependency*, *Feeling of Rejection*, and *Feeling of Hostility*, this film was shown at the International Congress on Psychiatry in Paris, 1950. The second film of the Child Development series, *The Terrible Twos and Trusting Threes* was released in 1950. The first film, *He Acts His Age*, released in 1949 has been widely shown; these two films were also exhibited at the International Congress. A third film in the Child Development Series is now being made.

The sales of prints of the film, *Rejection*, in the Mental Mechanisms series, set a record for print sales of any film produced by the National Film Board.

A display in poster form was prepared for the Department by the Canadian Exhibition Commission, for exhibition at the World Federation for Mental Health and International Congress of Psychiatry meetings. This display, which depicts the problem of mental health in Canada, and the uses to which the Mental Health Grant has been put, will be available for future use in exhibitions and meetings in Canada.

### **Tuberculosis**

The departmental campaign against tuberculosis is built round the Tuberculosis Control Grant of the National Health Program and, in case of Indians and Eskimos, the far-reaching program being developed by the Directorate of Indian Health Services described in Section V of this Report. Additionally, a substantial grant is made to assist the Canadian Tuberculosis Association to carry on its work on a national basis. The federal grant program has three basic objectives; the development of adequate case finding facilities in all areas of Canada, the provision of treatment measures capable of meeting the needs of every patient and the organization of necessary rehabilitation services to assist the return of patients to normal living following treatment of the disease.

*Preventive and Case Finding Services.* In most provinces case finding services have been greatly expanded through the establishment of both mobile and stationary clinics and the general extension of x-ray examinations and surveys. Federal funds have been extensively utilized for the purchase of x-ray equipment and for the training of physicians and of technicians to be engaged in the operation of x-ray, laboratory and clinical services.

Mass detection services were assisted in all provinces, with special attention being given to hospital admission x-ray examination programs and the x-raying on a regular basis of industrial groups. In some provinces the routine hospital admission x-ray examination is given to practically all persons admitted to hospitals of all types. As an example of a novel procedure in the detection program, a four-month seaborne x-ray survey was successfully undertaken in Newfoundland.

In the field of prevention assistance has been given to all provinces for the purchase of B.C.G. Federal funds were used in Quebec in the development of a large scale program of B.C.G. immunization of infants.

The vaccine is available to all children born in Quebec hospitals, with babies born in the home being vaccinated when attended by public health nurses.

*Treatment.* Sanatorium accommodation for tuberculous patients has been greatly increased through the Hospital Construction Grant, and free treatment of tuberculosis has been progressively extended. Since the initiation of the National Health Program federal funds have assisted the construction of over 3,000 beds in institutions in practically all provinces and in all provinces funds have been used for the purchase of sanatorium equipment and the training and employment of personnel. Particular emphasis has been placed on the extension and improvement of surgical facilities and the training of chest surgeons.

Before the federal grant became available streptomycin was reserved for the most urgent cases and in many instances could not be provided without charge. The grant has been utilized in all provinces for it to be provided free for patients who might benefit from its use, with the drugs P.A.S. and T.B.I. also being made available but on a somewhat less extensive basis.

*Rehabilitation.* The establishment and expansion of rehabilitation services designed especially for tuberculosis patients has been stimulated by the grant in most provinces. Programs which have been developed include vocational counselling and vocational training, given, usually in the sanatorium, as well as placement, guidance and assistance services.

Rehabilitation officers have been appointed in certain provinces, either to provincial divisions of tuberculosis control or to provincial tuberculosis associations. Existing services have been expanded through the employment of vocational instructors and the purchase of equipment and new programs were established in a number of the provinces as an initial step towards fulfilling the need in this important aspect of the over-all control effort.

*Research.* The developing program of tuberculosis control has stimulated a number of research studies, investigations and surveys designed to improve preventive and treatment methods. A number of studies were commenced on the different aspects of preparation and the immunizing effects of B.C.G. vaccine and other important work is being done in research on the most effective use of P.A.S. and streptomycin and on how the effectiveness of various diagnostic procedures may be improved.

### **Venereal Disease**

In venereal disease work the Department assists the provinces through the Venereal Disease Control Grant and provides leadership, particularly in regard to the planning of services and the co-ordination and integration of a national program, in consultation with government and non-government agencies actively engaged against venereal disease. Continuing close liaison is maintained with national and other voluntary organizations and with the Venereal Disease Control Division of the World Health Organization.

In both federal and provincial programs emphasis is placed on the same fundamentals applicable to all communicable disease; the provision of adequate diagnostic and treatment facilities, case finding, public education, investigation of the problem in particular localities and repression of the individual and environment responsible for the spread of disease. In accordance with approved control procedures, combined federal and provincial efforts have been directed mainly in support of such major projects as the provision of free diagnostic and treatment facilities, the

supply of free penicillin, the payment of fees to physicians for diagnostic and treatment services, and the training of personnel and the purchase of equipment. Emphasis has also been placed on the extension and improvement of laboratory services, epidemiological and educational activities and research.

Federal financial assistance to the provinces has been particularly marked in the field of venereal disease, where a matching grant was first instituted in 1919 and, except for a period in the middle and late thirties, has since been made available each year; on commencement of the National Health Program the amount of the grant was more than doubled.

In the different provinces the grant has been used in a number of different ways: in all provinces however it has been utilized to extend and expand pre-existing services so that a completely developed program will be possible. All provinces have been able to utilize practically the full amount of the grant available to them; in a number of provinces provincial expenditure considerably exceeds that required by the matching provisions of the federal grant.

During the year the Department concluded the review of syphilis records for service personnel in the second World War which was commenced in 1946 when demobilization had been virtually completed. It is believed that the permanent register of summarized histories prepared contains the greater proportion of all service cases diagnosed as syphilis during the period of hostilities. It will be used for reference purposes, and information can be made available in response to requests from practising physicians and provincial health departments. The Quarterly Statistical Report on Venereal Disease in Canada, which has now been prepared for five years from incidence figures reported by provincial health departments to the Dominion Bureau of Statistics, was continued, to provide an indication of progress and developing trends in venereal disease work.

In response to the need for a useful technical manual dealing with venereal disease and incorporating, for the practising physician and medical student, the most recent advances in therapy in this field, the manual *Syphilis and Gonorrhoea* was completed during the year. The popular lay informational booklet, *VD . . . What You Should Know* was also reprinted and is being made available for use by the Armed Forces as well as civilians.

With a view to the preparation of plans to cope with eventualities arising from the international situation, steps were taken during the year to re-institute the local liaison meetings between civilian and Service venereal disease control authorities. Interest and full co-operation in this aspect of venereal disease work have been extended by all concerned.

### Cancer

Departmental activities against cancer include administration of the Cancer Control Grant to the provinces, close co-operation with and assistance to the National Cancer Institute, and operation of the Canadian Tumour Registry.

Through the Cancer Control Grant, assistance is given to the provinces for the training of health personnel, the employment of staff for cancer work, the equipment of clinics, the purchase of radium and the provision of treatment services. With its aid provincial registries of cancer patients have been organized and programs of public education spon-

sored. Training has been given to physicians in cancer treatment and detection work and to technicians in x-ray and other therapeutic measures. All provinces have joined with the federal government in contributing a portion of the grant to the National Cancer Institute, for the carrying on of research.

The free treatment program provided by Saskatchewan and the substantial Alberta program of diagnostic medical and hospital services, treatment for old age pensioners and educational and preventive care have been materially assisted.

In Newfoundland, cancer services for the island are being developed, with the aid of the grant, at the General Hospital in St. John's where a tumour clinic and radiotherapy treatment section are being established. Tissue examinations for cancer patients are provided through the provincial laboratory. During the year, more than 1,300 persons received free therapeutic treatment.

Prince Edward Island has used the grant to organize a Cancer Control Division within the Department of Health, to provide a two-year training course for its director and refresher courses for other staff. Diagnostic clinics have been established at Charlottetown and Summerside, and provincial laboratories have been assisted to improve cancer diagnostic services.

Substantial aid has been given to Victoria General Hospital in Halifax, around which cancer control work in Nova Scotia is centred. X-ray equipment has been purchased for the clinic through the grant and the Pathological Institute has been assisted in improving laboratory cancer diagnostic services.

In New Brunswick, the grant has been used to assist the provincial plan for the extension of diagnostic services and for the provision of free treatment by radium, and x-ray therapy and limited hospitalization for diagnosis and treatment. The province has received assistance in establishing and supporting a cancer control division and a cancer advisory committee of medical specialists. A number of physicians have received training for cancer control work; therapeutic equipment has been purchased for hospitals, and federal funds have been allocated for the purchase of radium.

Quebec has been assisted in establishing clinics in a number of the principal hospitals in the province. The grant has also been used in aid of the Cancer Institute of Laval University, the Montreal Cancer Institute and the Radium Institute of Montreal. McGill University is being assisted, through the General Public Health Grant, in the conduct of a pilot study for the development and application of statistical procedures in cancer control, in an attempt to improve Cancer mortality and mortality statistics.

In Ontario, assistance has been provided to the Ontario Cancer Treatment and Research Foundation for the operation of the two cancer clinics it maintains and the eight regional clinics it supports. The grant has been used to assist in providing free biopsy service for cancer and suspected cancer cases and to aid in providing hospital care and treatment.

In Manitoba, assistance has been given to the Manitoba Cancer Institute to carry on the provincial program which includes diagnosis, extension of biopsy service without charge to all physicians in hospitals having no pathological services of their own, establishment of master diagnostic clinics at the Winnipeg and St. Boniface hospitals, provision

of x-ray therapy and of radium and the maintenance of a register of all cancer patients.

The British Columbia Cancer Institute has been assisted in its program under which consultative, diagnostic and radio therapeutic services are provided, together with free biopsies and cytology services. The grant is being used by the province for the purchase of diagnostic and therapeutic equipment for general hospitals, for the diagnosis and treatment of cancer, to assist the Cancer Institute in the operation of a nursing home, and for training of staff employed on cancer work.

### **Arthritis and Rheumatism**

Work against arthritis and rheumatism has been substantially advanced by a number of projects undertaken by the provinces with federal aid. Through the General Public Health Grant the provinces have provided material assistance to the extensive program being developed by the Canadian Arthritis and Rheumatism Society.

Nova Scotia is being assisted in the establishing of a treatment program and in New Brunswick an outpatient clinic for arthritic patients has been organized. In Quebec the provincial government is being assisted with the building of a 200 bed arthritis unit at the Hotel-Dieu de Montreal and with the training of personnel to staff it. In Ontario a number of projects of the Canadian Arthritis and Rheumatism Society have been supported and equipment has been purchased for eight clinics located in the principal centres of the province. In Manitoba, clinics have been assisted in Winnipeg and St. Boniface, and long-term hospitalization provided for special cases. In Manitoba support has been given to the Society's program under which clinics will function at Winnipeg and St. Boniface and hospitalization will be provided together with social, rehabilitation and physiotherapy services. In Saskatchewan, a professional director was employed through the grant for the provincial branch of the Society and a 12-bed experimental inpatient treatment unit has been assisted in Regina; assistance has been given to the Arthritis Centre at Victoria Hospital, Prince Albert, and to the Society's home care and follow-up program. In British Columbia aid was given to the provincial Division of the Society for the employment of staff and the establishment of clinics.

Substantial support has been given to a large scale research program for the investigation of the characteristics and uses of ACTH and Cortisone, for which the provinces have allocated part of their share of the General Public Health Grant to the National Research Council. To supplement this program funds have been made available under the Public Health Research Grant, to the Connaught Medical Research Laboratories for the development of a pilot plant for the production of ACTH from pituitary glands collected at Canadian abattoirs.

### **Poliomyelitis**

In a number of provinces existing services for poliomyelitis have been extended through the National Health Program; in all provinces assistance to services for crippled children has increased the aid available to children suffering from poliomyelitis.

Specific poliomyelitis programs which have been assisted include the already substantial Alberta program which has been expanded,

through aid from the grants, to provide treatment, appliances and rehabilitation for all poliomyelitis cases in the province. In British Columbia the services provided through the Western Society for Physical Rehabilitation have been aided. Nova Scotia has purchased respirators for the use of patients in the poliomyelitis clinic at Halifax and a federal grant has assisted in the construction of a new 70 bed poliomyelitis wing at the Victoria General Hospital in Fredericton, the centre for treatment in New Brunswick.

In Ontario an investigation of the role of sewage and water supplies in the spread of poliomyelitis, at the Connaught Medical Research Laboratories, is being financed through the Public Health Research Grant and studies are being carried on in the Hospital for Sick Children at Toronto with a view to improving methods of treatment during the recovery stage.

### **Dental Health**

In dental health work, attention is concentrated on broadening the field of preventive dentistry by reducing the prevalence of dental caries, irregular teeth and periodontal disease, with a view to improvement of general health. The Department makes financial aid available to provincial dental health programs through the National Health Program, provides consultant and advisory services to the provincial health departments and to the Canadian Dental Association, and carries on research and educational work in the field of dental health. Close liaison is maintained between the Department and the Canadian dental profession. The Chief of the Dental Health Division acts in an advisory capacity to the Board of Governors of the Canadian Dental Association and to the Association's committees on Public Health and Health Insurance. The Research Committee of the Association, in turn, advises the Department on technical matters relating to dental drugs and remedies.

*Grants.* Considerable aid has been given to provincial dental services through the General Public Health Grant. During the past three years seven of the nine existing provincial dental health divisions have been established with assistance from the grant and all provinces have utilized it to develop and extend preventive dental services, usually with special emphasis on services for children. Mobile dental clinics have been established, and the number of stationary establishments has been increased; dental services have been improved in many sanatoria and mental hospitals; dentists, dental assistants and nurses have been employed and many dental personnel have been enabled to undertake training in public health.

In Newfoundland, with the aid of the grant, preventive dental services have been initiated with the establishment of a public health dental clinic at the St. John's General Hospital. In the other three Maritime provinces, provincial divisions of dental hygiene have been established with federal grants being used to provide essential supplies and equipment. Nova Scotia has been assisted to organize two dental clinics in rural areas, and New Brunswick to enlarge dental clinics at Saint John and to purchase equipment for a new dental public health laboratory.

In Ontario, mobile preventive dental services have been organized in a number of health units and federal funds used to equip a railway coach travelling dental clinic for children living in remote communities where no dental services exist; its itinerary involves about 25,000 miles of travelling during each year. A new preventive orthodontic service has been established in Toronto with assistance from the grant. In Manitoba, a mobile preventive dental clinic for rural school children has been set up

and assistance given to a school dental health service for the children of Winnipeg. Through use of the grant, Saskatchewan has organized a dental hygiene division and has established preventive dental treatment programs in several regions; Alberta has improved dental services for children in Calgary. British Columbia has established a division of preventive dentistry. Dental clinics for rural areas are being established, and dental directors have been appointed to local health units. Two dental clinics have been inaugurated as part of the dental hygiene program for the Vancouver area, to provide preventive dental services for pre-school and grade one children, with the federal government sharing the cost.

*Research and Surveys.* The Brantford Water Fluoridation Caries Study being carried out by the Dental Health Division in cooperation with provincial and municipal health departments, with statistical assistance from the Research Division, was continued and, during the year, was extended to include an epidemiological study of gingival conditions among school children and young adults. In this study, the teeth and gums of 1,800 children in Brantford, where the public water supply is being artificially fluoridated, are being compared with those of 1,800 children in Sarnia, who serve as a fluorine-free control group, and with 1,800 children in Stratford where the water has an optimum natural fluoride content. Examinations conducted during the year include those of the 1,800 children in Brantford and Sarnia, as well as of over 200 young adults of Stratford. Consultative service on certain technical aspects of this work was obtained from the Associate Committee on Dental Research of the National Research Council and advice was obtained from members of university faculties of dentistry.

To assist in determining the place and value in an industrial health service of dental preventive services a pilot model dental preventive service was commenced through which prophylactic and counselling services are given to a group of civil servants. The project, which is carried on by a dental hygienist working under the supervision of a dentist, who also provides diagnostic services where indicated, is operated by the Dental Health Division, working in close co-operation with the Civil Service Health and Nutrition Divisions. To facilitate the referral of patients for emergency and other dental treatments, a working arrangement has been made with the Ottawa Dental Society. It is proposed to operate the pilot model service for a year or two to determine its place and its value in an industrial health service.

In conjunction with the Nutrition Division, the Dental Health Division participated in several local surveys, and in a Canada-wide nutrition study of Indian children which served to obtain data on the dental health of children in various parts of Canada. Oral examinations were also made of the patients in the optic atrophy study being carried on by the Department.

Other research has included studies of the relationship between bacterial flora of the mouth and dental caries and of the relationship between dental disease and general health.

*Education and Information Services.* To further the cause of prevention, dental health education material was prepared in the form of booklets, folders, posters, films and filmstrips, for use in schools, health units, industrial plants, and private dental offices. Informational material was designed to advise the public concerning the most effective methods of preventing and controlling dental disease, particularly among children, and stressed that less than one per cent of people escape tooth decay and that more teeth are being lost after age thirty from periodontal disease

than from decay. Taking into consideration the impossibility of estimating the number of people suffering from infected teeth, alveolar abscesses, pyorrhoea, lack of masticating powers and personal disfigurement, the Department has sought to make Canadians realize that only through regular early dental care of the child can dental disease among adults be brought within controllable limits, and diseases related to dental infection and deficiency be avoided.

*Other Activities.* Other dental health activities carried on by the Department included inspection and enforcement services in connection with the formulae of dental drugs and dentifrices and with the marketing of dental remedies, under the provisions of the Patent or Proprietary Medicines Act; control of the use of narcotics in the private practice of dentistry; and the provision of dental health services for Indians.

### **Blindness**

Departmental activity for the preservation of vision, carried on through the Blindness Control Division, includes the encouragement of research into the causes and cure of blindness, the dissemination of information for the preservation of vision in persons of all ages and the supervision of oculists' examinations for blind pensions. Assistance is given to provincial programs through the National Health Program and grants are made to a number of organizations active in work for the blind.

During the year considerable attention was paid to work in connection with the establishment of glaucoma research and treatment clinics through the General Public Health Grant. Following the establishment the previous year of the first of these clinics at the Toronto General Hospital, two additional clinics have been organized. The first, at St. Sacrement Hospital in Quebec, is operated in connection with the Medical School of Laval University, the second, at the Hotel-Dieu in Montreal, is affiliated with the Medical School of the University of Montreal.

Two research projects in Ontario which had commenced the previous year under the Public Health Research Grant were continued, one at the Sick Children's Hospital in Toronto where causes of blindness in children and methods of testing are being investigated, the other in Hamilton where a study of vision testing in the schools is being carried out by the city Department of Health. The University of Alberta was assisted in an experiment designed to assess the need for specialist and oculist services in schools. Saskatchewan was aided in the purchase of equipment for the examination of school children's vision.

In the experimental remedial treatment program for blind pensioners being conducted by the Department, in conjunction with the provinces of Nova Scotia, New Brunswick and Quebec, under which cost of treatment is defrayed on a 75-25 per cent basis by the federal and provincial governments, the number of operations for cataracts was increased and successful restoration of useful vision continued to be achieved in 50 per cent of cases treated.

During the past two years a study has been carried on by the Nutrition Division of hereditary optic atrophy in the Ottawa, Montreal and Pembroke areas, through the clinical epidemiological study of approximately 270 families where a predisposition to blindness exists on the male side.

Publicity continued to be directed toward the preservation of vision and the prevention of blindness. A blindness control supplement was

published in the November, 1950 issue of Canada's Health and Welfare, a new pamphlet in the Child Training Series entitled "Eye Trouble" was published and a number of articles were prepared, including "Colour Vision in Industry", for the Industrial Health Review.

Continuing study was given to major blindness prevention problems, including shortages of oculists in comparison to the numbers required if visual needs are to be met, the lack of eye hospitals in Canada, shortages of beds for eye patients, and the need for travelling eye clinics to service rural areas. As it is estimated that nearly half of all cases of blindness could be prevented by adequate treatment and that useful vision could be restored to at least 12 per cent of those now blind, the great need for increased work in the field of blindness is self-evident.

In connection with the administration of Pensions for the Blind, in which the Blindness Control Division co-operates with the Old Age Pensions Division and which is described under the report on the Welfare Branch of the Department, oculists were sent round the coast of Newfoundland and to Gaspé and the Magdalen Islands during the summer of 1950, to examine applicants for pension.

In some rural areas, generally where no local facilities existed for the proper testing of vision and supplying of eye glasses, there was a rise in the percentage of rejection for pension because of conditions that could be remedied by proper eye glasses. The Canadian National Institute for the Blind continued to supply eye glasses in cases where persons could not afford them, at cost or, when necessary, free of charge.

As in previous years the Department has worked in close co-operation with and supported the activities of the Canadian National Institute for the Blind and other agencies providing services for blind persons.

### **Nutrition**

Nutrition work in Canada is carried on by federal, provincial and municipal governments, though no nationally organized program exists. As food consumption is far above starvation levels, as average figures fail to indicate the scattered undernutrition that does exist and as improvement can more easily be effected through educational work than through case finding, programs are generally of an informational and research nature, supplemented by direct action toward certain groups and cases.

The nutritional work of the Department, which is centred in the Nutrition Division, includes assistance to provincial nutritional programs through the General Public Health Grant of the National Health Program; the provision of information and educational services; the carrying on of surveys and the conduct of research designed to define nutritional problems so that they may be more easily solved; and the supply of information, for which Canada is obligated as a contractual member, to international agencies such as the World Health and Food and Agriculture Organizations.

*Grants.* During the year nutritional services were expanded in five provinces through aid received under the General Public Health Grant. A Nutrition Division was established in Nova Scotia and additional nutritionists were employed in Nova Scotia and Manitoba, where a consultative nutritionist service has been established in Winnipeg. In Saskatchewan three regional nutritionists and a nutritional consultant have been employed for work in child welfare institutions and foster homes and nutritional education programs were expanded in Nova Scotia, Ontario and British Columbia.

*Information and Education Services.* Most of the nutritional publications produced in Canada are prepared by the Department; over 1,000,000 copies were provided during the year for distribution through provincial health departments. Most of these were revisions of publication that have been used for some years, though some new filmstrips were produced. Information is directed toward all the principal groups with which the nutritionist works, including mothers, school children, industrial workers, kitchen help and institutionalized persons; in addition much of this material has been found useful in the classroom. Nutritional materials were also prepared for use with Indian Health Services, for distribution with Family Allowance cheques, for use as a part of the department's industrial health and child and maternal health programs, and for news and radio releases. A series of kitchen books for lumber camp cooks was also prepared; such specialized items, especially when produced at the request of an industry, have been put on sale by the King's Printer.

*Consultation Services.* Consultation services provided by the Nutrition Division included examination of some 90 civil servants referred for nutritional problems by the Civil Service Health Division, the preparation of low sugar control diets in connection with the Department's dental health program and of diets for athletes in connection with the physical fitness program. Advice on kitchen designs was provided to the Hospital Design Division and a continuous consultation service was provided to Indian Health Services hospitals and nursing stations.

During the year the Department was appointed as consultant to the Nautical Services Division of the Department of Transport for the training and certification of ship's cooks, as required by the International Labour Organization. Services to the Northwest Territories Council included development of a Bannock mix, containing 10 per cent skim milk powder for the diet of Eskimos; storage and field tests of this mix were carried on in the North. Recipes of high nutritional value were developed for use in Indian schools and for institutions generally. Prior to the annual convention of home economics graduates, a course attended by 78 graduates was given by the Nutrition Division. Information and advice on nutritional problems was supplied to correspondents and lectures and reports were given at numerous provincial and technical meetings and at a number of universities in Canada and the United States.

*Research.* Research carried on by the Nutrition Division during the year included compilations such as the Table of Food Values, a socio-economic and nutritional study of blindness in a particular group in the Ottawa Valley, the carrying on of a nutrition survey and four different feeding projects in Indian Residential Schools.

The Table of Food Values Recommended for Use in Canada was first issued in 1946 because no compilation of Canadian information on this subject existed. Even now only some of the figures are strictly Canadian. A special design for this booklet was developed and much new information was obtained on weights and measures of foodstuffs. A complete revision was carried out during the year and calorie values were recalculated in terms of the new factors recommended by the Food and Agriculture Organization.

The blindness study is a preliminary survey intended to serve as a basis from which further research might be developed. About half the 260 family units surveyed were visited, and extensive laboratory, as well as clinical studies, were carried out on over 200 persons.

Only one nutrition survey was carried on during the year, the study of a typical county in southwestern Ontario, carried out in the Elgin-St.

Thomas Health Unit. Such surveys, the most extensive work of this type now being done in Canada, are carried on as a co-operative effort by the federal, provincial and local governments and serve to stimulate interest in nutrition and health generally. At the same time, by screening a group for nutritional defects, they assist in estimating the extent of malnutrition existing in Canada. If carried out in areas selected as being typical of the country as a whole, as recommended by the Canadian Council on Nutrition, such surveys would provide a comprehensive over-all picture of nutritional conditions in Canada.

In the four feeding projects being carried on in Indian Schools information is being sought as to the effect on health resulting from alteration of existing diets by doubling present low consumption of milk, by using flour "enriched" to United States standards, by the use of vitamin C tablets and by educational procedures. Controls of several kinds are being used: school against school, tablet against placebo, and pupil against self at a later time. Owing to the difficulties inherent in accurate evaluations of such observations, the project is planned to continue for 5 years from its commencement in 1948. In various phases it has involved assistance from the Dental Health Division, the Laboratory of Hygiene, the Food and Drug Laboratories, Indian Health Services, the Research Division, and the Indian Affairs Branch, as well as the Nutrition Division and the staff and students of the schools.

Other small research projects, especially in connection with laboratory diagnosis of different aspects of malnutrition, have been carried on during the year.

### *Industrial Health*

The Department, through its Industrial Health Division, attempts to give leadership and assistance in all phases of occupational health work. Through close co-operation with the provinces, some of which administer their own programs while others provide few or no services, the Department endeavours to promote better health services and to improve working conditions in both industrial and non-industrial occupations. In addition, technical aid is provided to a number of federal agencies, including crown companies, on occupational health matters. Industrial health activities fall into four main groups: assistance to provincial programs, made available through the National Health Program; medical and nursing consultative services; laboratory services, including research and field surveys; and educational and technical information services.

*Grants.* Through the General Public Health Grant assistance was given during the year to the province of Quebec for the reorganization and expansion of the provincial Division of Industrial Hygiene. In Ontario scientific equipment was purchased through the grant for two projects, for a travelling unit to provide x-ray examinations for industrial workers exposed to silica dust, and for investigation by the provincial Division of Industrial Hygiene of health hazards arising from radioactive materials, silica and aluma. In New Brunswick, federal aid was utilized to assist in setting up an industrial hygiene laboratory. A number of projects designed to promote the health of workers were also carried out through the Public Health Research Grant.

*Surveys and Research.* During the year major activities of the Industrial Health Division included the carrying out of a number of surveys and studies and new and enlarged laboratory facilities were completed to permit fuller application of post-war scientific advances in the study of health problems originating in different work environments. This modern

laboratory, combined with the clinical facilities available through the Division, provides a complementary scientific and medical service available for specialist assistance to provincial departments of health, federal agencies and, in some cases, to industry.

In co-operation with the Newfoundland Department of Health a preliminary health survey was made, in June 1950, of industry in that province. Data were collected from plants engaged in mining, manufacturing, and storage, and from laundry and dry cleaning establishments. Of 158 plants of eligible size, 44.3 per cent were surveyed.

A preliminary industrial health survey of the National Film Board premises, including the collection and analysis of air samples for carbon tetrachloride at different locations, was carried out by the Division in September 1950. A preliminary survey of the working environment of the National Research Council was made during October, November and December. Potential health hazards were discussed and recommendations for their control together with a suggested plan for the provision of medical services were included in the survey report.

At the request of Canadian Arsenals a plan for providing medical services in each of the company's plants was prepared. The plan, which was designed to meet immediate needs and to make provision for easy expansion in the event of material increase in the number of plant employees, was subsequently implemented and the Industrial Health Division is continuing to act in a specialist consultant capacity to the crown company in all phases of industrial hygiene.

Because many of the new organic insecticides have been found to be highly toxic to man, and because of the necessary exposure to them of primary producer, formulator and applicator and the resulting danger in working environments, whether in factory, field or orchard, a toxicology laboratory has been equipped to evaluate the health hazards of new chemicals, with particular attention to new insecticides. This service, combined with clinical medical appraisal, was made available to the Department of Agriculture on frequent occasions during the year.

To combat the potentially harmful agents to Canadian industry inherent in the increased use of x-rays and other types of radiation the Division's new Health Radiation Laboratory has been equipped with the most advanced instruments for assessing health hazards resulting from exposure to x-ray and radioactive isotopes. The division has taken over from the Chalk River Project the gamma ray monitoring film service for universities, hospitals and other users of radioactive isotopes.

Efforts being made to control smoke and other air contaminants have been lent urgency by the Donora incident. In the past year a consulting service has been provided to the Northwest Territories Council, in connection with problems in safe arsenic disposal from mines, and the division is actively engaged in assisting the International Joint Commission in a long term investigation of air pollution problems in the Windsor-Detroit area.

*Consultation Services.* The division acted in a consultative capacity on industrial health matters to the armed forces when requested and assistance was given on a number of occasions concerning problems in service establishments. Consultant services in industrial nursing were provided for industrial nurses, management, universities carrying on nurse education programs and professional nursing organizations. Several provinces were visited in the course of this work, to foster activities that

would assist the upgrading of nursing services in industry and the integration of industrial health nursing with the over-all health program.

*Information Services.* Professional personnel concerned with the health of workers, management, and labour groups were kept informed of developments in established procedures for maintaining a safe and healthful working environment, through the monthly "Industrial Health Bulletin" and informational material was also circulated on new conditions, processes and materials which may affect health. Two issues were distributed in 1950 of the Industrial Health Review, which is prepared for industrial physicians and nurses, industrial chemists and engineers and others engaged in the field of occupational health and serves as a medium for the interchange of views on industrial health matters. Technical assistance and information were provided in answer to many requests received from governmental and industrial sources on such subjects as ventilation, lighting, hazardous chemicals and working conditions generally, as well as for toxicological data on various substances. In addition, benefits to be derived from a comprehensive health program in industry were outlined to professional and industrial audiences on a number of occasions, and addresses and papers on special subjects or studies relating to the field of occupational health were prepared.

### **Hospital Design and Construction**

The Department has taken an active part in assisting hospital construction in Canada through the provision of assistance to provinces under the Hospital Construction Grant of the National Health Program and through assistance in the design and planning of hospitals, made available through the Hospital Design Division.

*Grants.* At the commencement of the National Health Program in 1948 shortage of hospital accommodation was one of the most urgent problems which had to be met. Under the Hospital Construction Grant, which makes over \$13 million available to the provinces each year for the building of new hospital accommodation, a five year objective was set in which it was hoped that 40,000 new beds would be obtained. From the commencement of the grant to the end of the fiscal year, federal aid has already been provided for 28,355 beds in new hospitals or additions to existing hospitals and hospitals have been established for the first time in 120 communities. Of the beds constructed with federal aid, some 16,931 have been provided in general hospitals, 3,215 in chronic and convalescent hospitals, 4,684 in mental and 3,525 in tuberculosis hospitals. During the year 90 new hospital construction plans submitted by the provinces were approved. Federal grants are also made toward the construction of community health centres in which hospital accommodation is provided together with preventive and treatment services; arrangements were made during the year for the conditions governing the distribution of the grant to be broadened so that, commencing in 1951-52, federal aid could also be made available for the construction of nursing quarters and laboratory space.

Besides being of material assistance to hospital construction throughout the country the grant has contributed to the raising of the general standard of hospital design as, to be eligible for assistance, a construction project must conform to the minimum standards which have been set by the Department after consultation with provincial health departments and leading hospital authorities.

In addition to aid to hospitals under the Hospital Construction Grant, very extensive assistance has also been extended under other grants of

the National Health Program, both for the purchase of equipment and for the training of hospital staffs.

*Consultation Services.* Because of the extremely complicated nature of modern hospital design, the large expenditures involved in hospital construction and the need for economical and functional planning, the importance of the Department's advisory role in the field of hospital construction has grown progressively as the Hospital Construction Program has developed. Architects, hospital administrators and hospital governing bodies have turned increasingly to the Department's Hospital Design Division for assistance with planning and construction programs. Because of the large number of hospital plans collected in connection with the administration of the Hospital Construction Grant the division now possesses the largest library of hospital plans in Canada. Experience gained in the administration of the program has led to its playing an important role as a clearing house and advisory agency on the different questions connected with hospital construction, including problems connected with construction materials and equipment, methods whereby staff work may be conserved through efficient location of facilities, and with new developments in construction designed to meet advances in medical knowledge.

### **Training of Health Workers**

Because of the grave nature of the problems raised through shortages of trained health workers of all kinds a large proportion of the amounts made available through the National Health Program has been utilized for the training of personnel. Some 3,700 persons including all types of health workers have received training through the program since its inception; during the year 2,015 persons received training, as shown in Table 3, page 50.

The grants have been utilized by the provinces for the provision of bursaries to persons selected by the provinces, and for the subsidizing of courses and other educational facilities for the training of health workers provided by universities, research institutes, hospitals and other institutions. Refresher courses and on-the-job training in places where useful experience might be gained have also been supported.

Persons receiving training under the program must undertake to accept suitable employment offered by the province on its completion.

Training has been given in a wide range of professional fields. Persons receiving training include psychiatrists, cancer specialists, chest surgeons, radiologists, x-ray therapists and physicians seeking diplomas in public health. Bursaries have been awarded to nurses for training in public health, maternity service in remote areas, teaching and supervision, public health administration, and for special work in such different fields as mental illness, tuberculosis, and venereal disease. Sanitary inspectors, industrial hygiene workers, health statisticians, laboratory and x-ray technicians, therapists and public health veterinarians are but some of the many types of health workers that have benefitted through the program.

In view of the acute shortage of nurses, special consideration has been given to their training and, in addition to the provision of bursaries and other special training facilities, assistance has been provided to the two experiments in accelerated training being carried on at the Metropolitan Hospital in Windsor and the Western Hospital in Toronto. In addition, to overcome shortages caused by lack of training facilities in the Atlantic provinces, the General Public Health Grant has been utilized to create the

Table 3. NUMBER OF HEALTH WORKERS WHO RECEIVED  
TRAINING UNDER THE NATIONAL HEALTH PROGRAM, 1950-51

Mental Health Personnel .....	311
Psychiatrists .....	86
Psychologists .....	114
Mental Health nurses .....	58
Psychiatric Social Workers .....	53
Other medical personnel .....	251
Public Health .....	36
Radiologists .....	26
Pathologists .....	10
Other .....	179
Dentists .....	15
Nurses .....	625
Teachers and supervisors .....	159
Public health .....	318
Other .....	148
Other public health personnel .....	813
Sanitary engineers .....	7
Sanitary Inspectors .....	55
Veterinarians .....	23
Therapists .....	8
Technicians .....	113
Health educators .....	52
Nutritionists .....	13
Social Workers .....	27
Other hospital personnel .....	515
TOTAL .....	2,015

co-operative training project supported by the four Atlantic provinces at Dalhousie University, where public health personnel including nurses have been trained. Aid has also been given to the training of practical or assistant nurses through courses established at Fort William, Montreal and other places, and through assistance given the provincial training scheme for nurses' aides in Alberta.

Training has also been accentuated in the over-all mental health program to alleviate the serious shortage of experienced personnel in that field. Under the Atlantic provinces' joint training plan psychiatrists and psychiatric social workers are being trained at Dalhousie University. Laval University, the University of Montreal and McGill University have been enabled to extend facilities for training psychiatrists, psychiatric social workers and psychiatric nurses. At the University of Toronto, federal grants have assisted a large program for the training of psychiatrists, psychologists, psychiatric social workers and psychiatric nurses. A post-graduate training course for psychiatrists and clinical psychologists has been organized at the University of Western Ontario. The University of Manitoba has extended its facilities for the training of psychiatrists and clinical psychologists, and psychiatric social workers are being trained at the University of British Columbia.

#### **Public Health Education**

The various activities of the Department in the field of public health information have been mentioned in other places in this report. The complete report of this work, which is carried on through the Information Services Division of the Department, is contained in the section describing the activities of that Division.

In addition to the assistance rendered directly to the provinces in this field by the preparation of material for distribution through provincial departments of health, considerable aid has been given to provincial health education programs through the General Public Health Grant, under which health educators have been trained and employed in most provinces, and equipment and films purchased.

Some ways in which the grant has been used include the establishment in Newfoundland of a Health Education Division, the expansion of the Saskatchewan Health Education Division, by the employment of instructors to give instruction on public health education in Normal Schools and by purchase of motion picture equipment, the strengthening of the British Columbia Public Health Education Division, and of programs carried on in Vancouver and Victoria by employment of staff and equipment, and the provision of assistance to Quebec in providing training and in school health at the University of Montreal for school teachers.

#### **Public Health Research**

Different research projects being carried on within the Department, or which have been supported through the National Health Program are mentioned in various sections of this report. Research is carried on within the Department as required by different departmental service programs and in all cases arises from the requirements of this work.

Research of a scientific and technical nature is carried on by the laboratories and by a small number of other Divisions. Although a number of different divisions also carry on research of a socio-economic nature in different areas of public health work this type of research is generally centred in the Research Division. Activities of the Research Division are described in the Administration Branch Section of this report.

### **Public Health Laboratory Services**

One of the major Departmental activities in the field of laboratory services during the year was the survey, by officers of the Laboratory of Hygiene, of public health and hospital laboratory services at the request of provincial governments. Interest in this work developed during the previous year, when the first request for a survey was received from New Brunswick. During the past year a survey in Saskatchewan was undertaken and two other provinces have requested similar assistance. These investigations have pointed out many weaknesses in existing methods of providing accurate diagnostic aids to medical practitioners. Problems such as the shortage of qualified professional laboratory personnel have been particularly noticeable and questions connected with the training and competency of technicians are being studied. To assist in the solution of problems disclosed by the surveys a fully equipped biochemical laboratory has been established in co-operation with the Ottawa Civic Hospital, for study of procedures used in Canadian hospitals.

Assistance to provincial laboratory services has also been provided through the General Public Health Grant. New branch laboratories have been built and equipped in several provinces with the help of the grant; an outstanding development was the establishment of a Department of Virology at the University of Montreal. In all provinces, laboratory services were extended through the purchase of new equipment and the employment of skilled technical personnel; through the grant, senior bacteriologists were employed by the public health laboratories of four provinces; Newfoundland, Prince Edward Island, Manitoba and British Columbia. The training of laboratory personnel has been an important continuing feature of the use of the Professional Training Grant.

Virus work has been particularly active. Because of concern caused by the occurrence of epidemic influenza in Europe a Canadian Influenza Centre was established in the Laboratory of Hygiene to act as a co-ordinating agent with the World Health Organization, to co-ordinate activities in Canada and to serve as a clearing house for the collection and distribution of information. An improved container for the shipment of frozen specimens was designed and supplied to provincial laboratories for the collection of specimens of suspected influenza cases. A reported outbreak of influenza in Labrador was investigated. Acute shortage of suitable working space has restricted virus work and plans have been made for the construction of a modern virus laboratory.

At the regular annual meeting of the Technical Advisory Committee on Public Health Laboratory Services two resolutions were passed, the first dealing with the importance of laboratory services in the event of biological warfare and the necessity for full consultation with laboratory personnel in defence planning, the second stressing existing laboratory shortages and the importance of detailed study of facilities before any expansion of services is planned. Considerable attention was also devoted to the question of possible integration of public health and hospital laboratory services, to problems connected with the conduct of diabetes surveys, to the possibility of arriving at an accurate breakdown of laboratory costs and to a number of technical questions such as the treponemal immobilization test for syphilis and the importance of pleuro-pneumonia-like organisms in non specific urethritis.

In the first eighteen months of the operation of the Tumour Registry, 562 tumours were received from 40 contributors in ten provinces. Of these, 103 were referred to the panel of consultants, with reports being made to contributors.

During the year, the Department acquired a new mobile laboratory which will be available to provincial departments of health for investigation of public health problems. It consists of two vehicles, the first a standard interurban style bus with the interior fitted as a compact public health laboratory, the second a standard coach for the transportation of research workers.

Several refresher training courses were conducted for provincial public health laboratory workers. About twenty speeches and articles were prepared by members of the laboratory staff during the year, the greater number of which were published in leading Canadian and American scientific journals.

### **Bacteriology and Immunology**

Bacteriology and immunology activities were of three major kinds, assistance to provincial departments of health, control work and special projects.

*Assistance to the Provinces.* The type of assistance given to the provinces is largely determined by recommendations of the Technical Advisory Committee. The progressively increasing importance of the work carried on by the National Salmonella Reference and Typing Centre, established in the Laboratory of Hygiene three years ago as a result of such recommendation, demonstrates the usefulness of this collaboration in planning. The number of cultures sent to the centre for identification has increased each year; during the past year three types *S. san-diego*, *S. adelaide* and *S. meleagridis* which had not previously been reported in Canada, were found among specimens examined, and a new type, *S. montreal*, isolated by the Quebec provincial laboratories from a patient with gastroenteritis, was identified. The laboratory collaborated in an investigation of *S. enteritidis* food poisoning which occurred in a local hospital. The "typing service" of hemolytic streptococci and diphtheria bacilli was continued for the provinces.

A parasitological diagnostic service was also extended to the provincial laboratories and a number of specimens were received for diagnosis and reported on.

*Provision of Standard Diagnostic Reagents.* Because of the importance of ensuring that reagents used in laboratory tests are of the highest quality and are standardized to give uniform and interpretable results, the Laboratory of Hygiene prepares and supplies a number of these reagents to the provinces and to D.V.A. hospitals. To meet increased demand for standard agglutinable suspensions of typhoid-paratyphoid bacilli for use in the serodiagnosis of enteric disease, the Laboratory supplied 225 liters of these suspensions, 60 liters more than in 1948-49, and 21 liters more than in 1949-50. Small quantities of Trichinella and Echinococcus antigens, Blastomycin, Histoplasmin, Toxoplasmin, and Coccidioidin were also distributed on request. Lancefield grouping sera for the diagnosis of hemolytic streptococci, and polyvalent sera for the screening of Salmonella organisms were prepared and distributed.

*Refresher Training Courses:* The Laboratory of Hygiene performs a particularly useful function in the giving of refresher courses to key workers in Canadian public health laboratories. During the year, as a result of requests from laboratory directors for refresher courses in parasitology, medical mycology and enteric bacteriology, a three week course in medical parasitology was given for senior workers from six

provincial laboratories and the Department of National Defence. The course included new techniques and methods of diagnosis together with complete coverage of the three branches of parasitology, protozoology, helminthology and medical entomology, and was presented with a minimum of time spent on lectures. As a continuation of this program, study sets of parasitological material are prepared and sent each month to the provincial laboratories and to the parasitologist of the R.C.A.F. It is hoped that arrangements can be made to give additional training courses in the coming year.

*Control Activities.* During the year it was possible to increase the routine testing of the potency and safety of such biologic drugs as vaccines, toxoids, antitoxins and sera carried out, under the authority of the Food and Drugs Act, by the Laboratory of Hygiene, which acts in this instance in a technical and advisory capacity to the Chief Dominion Analyst. The number of potency assays for diphtheria and tetanus toxoids are limited now only by the number of experimental animals available. Twelve specimens of tetanus toxoid and one of diphtheria toxoid were rejected because of low potency.

Transfusion sets, intravenous solutions and distilled water were routinely tested for the Canadian Red Cross Blood Donor Service. An increasing number of blood banks have taken advantage of this service during the past year, with a corresponding increase in the volume of work done. Approximately 10 per cent of specimens examined were found to be pyrogenic.

B.C.G. (anti-tuberculosis), pertussis and typhoid-paratyphoid vaccines were routinely tested. Special studies on typhoid vaccines were carried out in close collaboration with the U.S. Army Medical School of Graduate Studies and the Laboratory of Biologics Control of the National Microbiological Institute of the National Institutes of Health. A satisfactory method for the assay of potency was developed and a unification of standards for typhoid vaccine was effected between Canada and the United States. A bacteriological survey, including complete antigenic analysis, was carried out on all cultures used in the manufacture of typhoid-paratyphoid (T.A.B.) vaccine for sale in Canada. A number of cultures were found to be unsatisfactory and licenses of two manufacturers were cancelled. It is intended to maintain this type of routine control.

Regular inspections of Canadian and United States manufacturers' establishments were carried out as usual during the year. British manufacturers holding Canadian licenses were inspected for the first time; licences of two manufacturers were cancelled and that of a third suspended pending correction of faulty conditions.

The Laboratory co-operates with the Division of Public Health Engineering and the Department of Fisheries in control of the shellfish producing areas of the maritime provinces. The acquisition of the mobile laboratory will make it possible to increase the scope and volume of this work. The bacteriological survey of shucked market oysters imported from the United States was continued. New bacteriological standards for grading and acceptance, proposed at the end of last year, were tentatively adopted and appear most satisfactory. Close liaison with United States authorities has been maintained, and a most heartening co-operation continues between the Department and the United States Public Health Service.

An improved scheme introduced by the Department and the Department of Fisheries, for the sampling and routine control of toxicity in clams and mussels on the east coast proved to work effectively. As in past

years, packs of canned clams were routinely examined. The toxicity of shellfish on the east coast was, in general, lower this year than usual. A number of shellfish extracts from the west coast were also received for testing.

The bacteriological examinations of certain types of food, e.g., pharmaceutical gelatin and agar-agar, was continued and an improved method for the examination of gelatin was developed. The discovery of the widespread sale of horsemeat in Ottawa led to a large number of specimens of meat being submitted for identification so that existing small stocks of specific sera were exhausted, and new anti-sera had to be prepared. As a result of these tests and the evidence of the Department's technical staff, a number of vendors were successfully prosecuted for selling horsemeat illegally. Prominence given to these trials by the press has led to an increased demand from municipalities for this type of test.

During the year the Laboratory undertook to carry out routine tests of water samples submitted on a weekly basis by inspectors of the Public Health Engineering Division.

*Special Projects.* Surveys to determine the incidence of trichinosis and amoebic dysentery, initiated a year ago with the co-operation of the Ottawa Civic and General Hospitals, were continued. The incidence of *E. histolytica* continues to be about 4 per cent, and that of trichinosis about 5 per cent. It is hoped to extend these studies, through a more extensive system of sampling, in an attempt to obtain an accurate picture for Canada of the incidence and distribution of these parasites.

Investigation was continued of methods and materials for the immunization of children. The program, started in 1946 in collaboration with McGill University, has yielded much interesting information and has now been extended to include work with a group of pediatricians in Ottawa.

Studies on oral immunization were commenced last year in collaboration with McGill University and the Connaught Medical Research Laboratories of the University of Toronto. Results of the oral immunization of 40 adults and 15 children with diphtheria and tetanus toxoids were sufficiently valuable to indicate need for further study. While there was little indication that primary immunization can be established in man via the oral route, it appears that this method of administration has possibilities in stimulating a secondary response. There were no reports of constitutional or intestinal disturbance in either adults or children following the ingestion of these toxoids. Lederle Laboratories, Pearl River, New York, are now collaborating in this study.

A rapid method developed for the quantitative estimation of *H. pertussis* agglutinins, by the use of concavity slides, proved to be accurate and to possess several advantages over the techniques ordinarily in use. It was demonstrated at the Laboratory Section meeting of the Canadian Public Health Association in Ottawa in December, 1950.

In order to facilitate the testing of virulence of diphtheria bacilli in laboratories where guinea pigs are difficult to obtain, the plate (in vitro) virulence tests were checked against animal tests on several hundred cultures of different types of *C. diphtheriae*, were found to be highly satisfactory.

To fill the need for a centralized service capable of identifying all types of Enterobacteriaceae—dysentery, paracolon and coliform bacilli,

as well as typhoid-paratyphoid (*Salmonella*) organisms — a *Shigella* (dysentery) typing service, similar to the *Salmonella* service, is being developed, which it is hoped to make available to the provinces in the near future.

During the year the Laboratory assisted in carrying out a bacteriological survey of Ottawa restaurants. With improved facilities made available by the new mobile laboratory, bacteriological services such as this will be readily available to provincial health departments.

At the request of the New York State Laboratories a very helpful and informative study was carried out by the two laboratories of Lancefield grouping sera prepared by them and by the Laboratory of Hygiene.

### **Clinical Laboratory Services**

The Laboratory of Hygiene continued to co-operate with provincial public health laboratories to ensure uniformity in blood tests for syphilis and to distribute standard reagents (antigens and complement) free of charge. A survey to evaluate accuracy of tests performed in provincial laboratories has been completed. This laboratory has been designated by unanimous vote of provincial public departments as the national reference body for syphilis serology.

During the year standard reagents prepared at the Laboratory were distributed to provincial public health and DVA hospital laboratories in the following amounts: Kahn Standard Antigen, 19,210 cc., Kahn Sensitized Antigen, 16,580 cc., Kolmer Antigen, 620 cc., Mazzini Cholesterolized Antigen, 525 cc., V.D.R.L. Slide Test Antigen, 240 cc., Dehydrated Guinea Pig Serum (complement) equivalent to 34,662 cc. fresh serum, and hemolysin, 390 cc.

In the fifth serological survey, completed on 31 March, specimens from 105 syphilitic and 105 nonsyphilitic donors were sent to each of the provincial laboratories; reports will be compiled and analysed.

The Laboratory is participating in an international exchange of blood specimens designed primarily to determine the relative sensitivity levels of the testing procedures used in different countries. An officer of the Laboratory is a member of the Expert Advisory Panel on Venereal Infections and Treponematoses of the World Health Organization.

The Research laboratory at the Ottawa Civic Hospital has been equipped for clinical chemistry studies, so that it is possible to evaluate clinical procedures on the basis of available pathological specimens and to gain an appreciation of the problems of workers in hospital laboratories. In the initial phase of the program a detailed study has been made of methods for the determination of glucose and nonprotein nitrogen in the blood.

### **Antibiotics and Disinfectants**

During the past year, increasing emphasis has been placed on laboratory research and clinical investigation projects as well as on longer established functions such as the antibiotic and disinfectant laboratory control programs and consultative services to hospitals, universities, federal and provincial departments and other public health authorities, members of the medical and allied professions, manufacturers and technical and research organizations.

*Research.* Study is being continued of the effect of combinations of antibiotics upon micro-organisms causing human infections and the development of resistance to the drugs; the results will shortly be publish-

ed. Also in progress is a study of organisms in human mouths to attempt to shed some light on the cause of tooth decay. Work of this type has involved thousands of sensitivity and hundreds of therapeutic tests in experimental animals. Biochemical studies of the effect of penicillin on bacteria have been continued and definite advances made in knowledge of this difficult question. Numerous miscellaneous short-term projects have been undertaken, generally in response to specific inquiries on such questions as sterilization of instruments, chemical disinfection of surfaces, identification and potency of antibiotics in mixtures, and properties of disinfectants important for their action.

Based on this laboratory investigation, a clinical trial of favourable combinations of antibiotics against refractory urinary tract infections is in progress. Organisms representing stubborn infections received from provincial sources are subjected to laboratory study with a view to their being amenable to some type of chemotherapy. The stability of sterile antibiotic solutions as diluted for use in hospitals has been estimated, with valuable results which could not be obtained in any other way.

*Control.* An active laboratory testing program is maintained to keep sub-standard material off the market. During the year a total of 2,166 specimens were received for testing (penicillin 1,390, streptomycin and dihydrostreptomycin 314, other antibiotics 204, disinfectants 258) a total of 2,664 tests were carried out and 30 specimens rejected as sub-standard (penicillin 8, streptomycin and dihydrostreptomycin 1, disinfectants 21).

Because of the number of manufacturers of penicillin and the number of forms in which this drug is sold, it is as difficult to control its quality as that of all other antibiotics combined. Routine laboratory and administrative work is kept to the lowest levels consistent with safety and, to conserve use of personnel, improved methods are constantly sought, with full use being made of chemical methods after their initial appraisal. A comparison of chemical methods for testing penicillin appeared in the journal, "Analytical Chemistry" and a study of ultraviolet absorption of dihydrostreptomycin will appear shortly. Other investigations involve important properties of antibiotics such as stability and moisture. The reasons for some of the discrepancies accompanying use of quaternary ammonium disinfectants are also being investigated.

Technical services and advice regarding these drugs have been rendered to the Division of Food and Drugs of this department, the Departments of Agriculture, National Defence, Veterans Affairs and National Revenue, as well as to provincial, municipal and private agencies.

To fulfill a real need for a national centre of antibacterial chemotherapy, a comprehensive program making full use of available staff and facilities has been worked out, with staff dividing their time between investigation and routine assignments.

### **Virus Diseases**

During the early part of the year, the Department collaborated in laboratory investigation of an epidemic of infantile diarrhea which occurred among the Indian population of Manitoulin Island in the summer of 1949. A number of specimens were examined for the presence of virus and serological tests on virus diseases were carried out; it was established that the disease was not caused by any of the commonly known strains of virus.

An epidemic of an upper respiratory infection near Edmonton in the spring of 1950 was investigated and found to have been caused by an A-prime strain of virus influenza. A similar epidemic at Fort Chimo was also studied and experimental data showed that it was not caused by any of the known strains of virus influenza. An investigation of a respiratory infection among personnel at the R.C.A.F. Station, Rockcliffe, was under investigation at the end of the year.

During the year about 950 serological tests were carried out on clinical sera received from the provincial departments of health and, to a lesser extent, from institutions such as the Neurological Institute, Montreal, local hospitals and hospital units of nearby R.C.A.F. stations. As a part of these investigations, all samples were examined to ascertain the presence of antibodies to Q fever. The presence of antibodies in sera from two patients in the west indicates that Q fever may be prevalent in endemic form in the western provinces.

Preparations were completed for the production of stable viral diagnostic antigens and sera for the laboratory diagnosis of a number of pneumotropic virus diseases to be distributed to provincial laboratories, as soon as a training scheme has been completed to familiarize technical staff with the virus diagnostic procedures in which these reagents are being employed.

Virus research also included investigation into diagnostic methods of pox viruses, influenza viruses and into methods of preparation of stable diagnostic antigens and sera.

#### **Western Branch Laboratories**

As in previous years, the major portion of the work of the Western Branch of the Laboratory of Hygiene, at Kamloops, has been concerned with location of foci of rodent-, tick- and insect-borne infections, particularly plague, Rocky Mountain spotted fever and tularemia, which in their primary hosts are detected only by means of laboratory tests.<sup>1</sup>

No evidence of plague was encountered this year in either Saskatchewan or Alberta, but, for the first time since surveys were initiated thirteen years ago, plague infection was discovered in British Columbia. Infected fleas were found on a marmot taken near Princeton in the southern part of the province; no infection was encountered in other rodents or ectoparasites examined. Highly virulent strains of *Pasteurella tularensis* were recovered from ticks submitted from several different areas of both Saskatchewan and Alberta. No signs of Rocky Mountain spotted fever were encountered.

Advantage has been taken of the opportunity afforded by rodent surveys in the coastal region of British Columbia to gain further information regarding the infections, other than plague, that are harbored by domestic rats. Attempts were especially directed toward determining the incidence of leptospira infection (infectious jaundice).

In addition to studies on rats, attempts have been made to obtain some indication of the incidence of leptospirosis in dogs in the Vancouver area, with fifteen specimens of blood from suspected cases being examined. Three of seventeen live rats from the Fraser Valley harbored virulent leptospira and seven of the fifteen dog sera examined have

(1) Specimens collected by field crews include 904 wild rodents, 19 domestic rats, 1795 ectoparasites and 7737 ticks in Saskatchewan; 559 wild rodents, 1175 ectoparasites and 4094 ticks in Alberta; and 987 wild rodents, 185 domestic rats, 11,045 ectoparasites and 173 ticks in British Columbia.

proved positive to *Leptospira canicola*. One specimen of serum submitted from a suspected human case in Montreal proved positive to *Lieterohemorrhagiae*.

A record is maintained of the incidental infections encountered in rodents that may be transmitted to man, including cysticercosis, capillaria infestation pasteurellosis, tuberculosis, pseudotuberculosis, tularemia and rat bite fever.

During the year, some eighty-six special diagnostic tests for tuberculosis, tularemia, Rocky Mountain spotted fever, brucellosis, leptospirosis and lymphocytic choriomeningitis were carried out for Indian Health Service and other laboratories.

Approximately 494 ccs. of concentrated diagnostic *Brucella* antigen and 130 ccs. of *Pasteurella tularensis* antigen were supplied free of charge, to provincial and D.V.A. laboratories. Research studies were carried out, as time permitted, with a view to improving the antigens and diagnostic tests now in use.

## HEALTH PLANNING AND DEVELOPMENT

### **The National Health Survey**

One of the basic purposes of the National Health Grant Program has been to assist the provinces in surveying their health facilities and services. The Health Survey grant has enabled each province to carry out comprehensive studies of all its health services in relation to present and future requirements and an over-all appraisal of needs to serve as a guide in future development of its health program. Within this framework specific attention has been concentrated on planning for the utilization of the health grants and on a thorough survey of hospital facilities. Although the grant, which was made available in 1948, is not paid annually, unexpended portions have been carried over from year to year so that each province has been enabled to carry out an orderly and planned survey. It is expected that all provincial surveys will be completed during the coming year.

Fields of study covered by the provincial surveys include methods of provincial and local health administration, health services provided by provincial and local governments and voluntary agencies, hospital facilities, medical and hospital care plans, and expenditures on health care. Because of the survey it is now possible for the provinces to chart health and hospital needs so that all grants may be used with the most effective results.

The conditions governing the distribution of the grant do not rigidly limit the use to which it may be put. Subject only to over-all federal co-ordination, each province has been left to organize its survey activities according to its own needs. However, a pattern has developed in the provinces which, it is expected, will make possible the compilation, by the Research Division, of a comprehensive nation-wide report on personnel, health services and hospital facilities in Canada.

### **The Canadian Sickness Survey**

Closely associated with the provincial health surveys is the nation-wide sickness survey being carried out with the assistance of the National Health Program to make a general assessment of the amount and prevalence of illness in Canada and to attempt to determine Canada's health needs more accurately than has ever been possible heretofore.

The survey, the largest undertaking of its kind ever attempted, covers a group of 40,000 Canadians representing 10,000 household groups, selected on a scientific sampling basis to represent an accurate cross section of Canada's people. It is being carried on by all ten provinces with the active assistance of the Department and the Dominion Bureau of Statistics. Within the Department the Directorate of Health Insurance Studies and the Research and Epidemiology Divisions have played a major role in the survey's development.

Through the survey, detailed information is being collected by each province on both chronic and acute illness and on injuries and disabling conditions generally, including long term as well as minor ailments. As with the National Health Survey of 1935 in the United States, it may be years before all the data obtained are completely analysed. However, from the time the first survey findings become available health workers will be provided with hitherto unobtainable information that will be invaluable for future planning.

Some of the more important of this information will include good working estimates of the actual amount and distribution of illness in the population, and how much time is lost from regular occupations through illness. In addition some data should become available on the relationship between environment and health, and on consumer expenditure on medical and hospital care. Through a supplementary study of permanent physical disability being carried on in connection with the Survey some idea should also be gained of the numbers of permanently disabled persons in Canada, of the length of time disability has existed, and of the extent to which disability has interfered with capacity to carry on regular occupation. Some information will also be obtained as to the number of disabled persons who are self supporting and of those who require assistance.

The enumeration, which commenced in the autumn of 1950, is planned to continue throughout one full year. Information is collected monthly from selected households by lay enumerators under the direction of trained supervisors employed by the provincial departments of health. Findings will be tabulated by the Dominion Bureau of Statistics and, in co-operation with the Department, the results will be examined, analysed and interpreted. Full co-operation by survey families, family physicians and others connected with the survey has been extended since its commencement.

### ***Rehabilitation of Disabled Persons***

During the course of the year, activities in the field of rehabilitation were directed primarily towards preparation for the National Conference on the Rehabilitation of Disabled Persons which took place in Toronto the first three days of February, 1951. The Conference was originally scheduled to take place in May 1950, but was postponed because the Red River Valley flood precluded the attendance of a number of provincial representatives at that time.

The National Conference was the first of its kind to be held in this country. Designed to explore the possibility of the establishment of a national rehabilitation program, to review existing rehabilitation facilities in Canada and to assess the possibility of co-ordinating existing facilities more fully, the Conference was sponsored by the federal Departments of Veterans Affairs, Labour and National Health and Welfare. It brought together representative from the federal and provincial governments, voluntary agencies engaged in work directly or indirectly con-

nected with the various aspects of rehabilitation, as well as professional organizations. Over 200 persons from all parts of Canada were present.

On behalf of the Interdepartmental Committee in charge of arrangements, on which the Department was represented by the Chief of the Industrial Health Division and the Director of the Research Division, the Research Division was responsible for the compilation of a comprehensive volume of background material on rehabilitation, which was supplied to the Conference delegates. This data included studies of existing rehabilitation programs both in Canada and other countries, outlines of the underlying principles of rehabilitation programs and community planning, and studies of the extent of disability, and of income maintenance programs for disabled persons, in Canada.

The Conference, which carried on its deliberations through two working committees, one dealing with vocational guidance, training and placement of handicapped persons, the other with the medical aspects of rehabilitation, approved a number of important resolutions. It recommended that the federal government appoint a full-time co-ordinator for rehabilitation activities in Canada and that a National Advisory Committee be established to co-ordinate and provide central guidance for rehabilitation planning. It was recommended that the Committee consist of 35 members representing government and non-government agencies, associations and professional organizations connected with rehabilitation, the universities, employers and organized workers. Other recommendations dealt with different questions connected with the development of an over-all network of services that would be available to all disabled persons in Canada, to include persons with all types of disability and in all age groups.

### HEALTH CARE STUDIES

Departmental activities in health insurance work are the responsibility of the Directorate of Health Insurance Studies, with research studies being conducted by the Research Division.

During the year a complete re-evaluation of the 1945 Proposals for Health Insurance has been undertaken, with close attention being paid to analysis of systems in operation in all countries, including detailed study of program, administrative methods employed, the success with which objectives are being met, the principal difficulties that have been encountered and costs and methods of financing. Considerable study has also been devoted to analysis of the supply of medical, nursing, dental and other health personnel in Canada, their distribution throughout the country and the extent and distribution of shortages, and methods by which they can be overcome.

The operation of the British National Health Service and New Zealand program has received particularly close attention. Certain features of the programs in Sweden and Denmark which appear to possess considerable relevance to Canadian planning continued to receive detailed study and health insurance planning in other countries such as Australia and the United States has been kept under constant review.

Officers of the Department have kept in close touch with health care developments in the United States through membership on the Subcommittee on Medical Care of the American Public Health Association. In addition, close attention has been paid to the work of the Health Insurance Plan of Greater New York.

The experience of the provincial hospital programs operated in Newfoundland, Saskatchewan and British Columbia has received special

attention, and study of the various Canadian voluntary prepaid hospital and medical care plans has assumed an increasingly important role, because of the number of plans which have now been long enough in operation to provide important data on utilization and costs.

Exceedingly valuable material will be made available through the health and sickness surveys now being carried on by the provinces, which will give very much more complete data than any hitherto available on existing health services, and the prevalence of illness and disability.

## V

### MEDICAL AND HOSPITAL SERVICES

#### *Indian Health Services*

During the year some 1,200 full time and many other part time health workers were employed in caring for the health of Canada's Indian and Eskimo population, from Old Crow in the Yukon to Sydney on Cape Breton Island. While the provision of health services to Indians and Eskimos is not a statutory obligation, a well-developed program, under which medical, hospital and dental care and general health services are provided, is administered by the Directorate of Indian Health Service, in an effort to improve the health of the native peoples.

In recent years the expansion of Indian and Eskimo health facilities and services provided by the Department has been greatly accelerated; expenditures rose from \$2,299,763 in 1945-46 to \$9,900,955 in 1949-50 and to \$10,285,668 in 1950-51. Services are provided directly through the operation of a network of hospitals, nursing stations and other health centres, through the employment of full time medical officers, dental surgeons, and graduate nurses, and by special arrangement with private practitioners, private and community hospitals, provincial health services and lay persons who serve as dispensers of drugs and other medical supplies.

There is hardly any considerable area in Canada where Indians or Eskimos are not located; isolation and dispersal dominate the problem of providing health care, especially in the far north. More than half of all Indians are located beyond areas served by roads and railways, and all Eskimos live in the extreme northern areas. The northern Indians and Eskimos are nomadic or semi-nomadic people engaged in trapping, hunting and fishing.

*Hospital and Health Facilities and Services.* During 1950-51 Indian Health Services operated 18 hospitals with a patient capacity of 2,128 beds, 29 nursing stations with a total bed capacity of 159 beds and 49 other health centres. Size of hospital varied from the 456 bed Charles Camsell Indian Hospital at Edmonton to small units such as the 16 bed Fort Alexander Hospital at Pine Falls, Manitoba; many were formerly operated by the Department of National Defence, others were constructed in recent years by Indian Health Services. A notable event of the year was the opening of the new 200 bed Moose Factory Indian Hospital at the southern tip of James Bay, where the first patient was received on September 9, 1950. New construction under way during the year included the 18 bed Hobbema Indian Hospital in Alberta and an addition of 50 patient beds to the Fort Qu'Appelle Hospital in Saskatchewan. New Health centres were opened at Cape Dorset on Baffin Island and at Pointe

Bloue and Restigouche in Quebec and construction was commenced on seven others.

The services of 362 community and private hospitals were utilized for the treatment of Indians and Eskimos. Hospitals were paid per diem rates, except in British Columbia where Indian Health Services paid for the coverage of Indians under the provincial Hospital Insurance Service. In Manitoba, the Sanatorium Board operated three sanatoria on behalf of Indian Health Services.

*Hospital Utilization.* Departmental hospitals admitted 7,037 patients, an increase of about 1,000 over the previous year, and patient days totalled 629,026, an increase of about 100,000. Discharges totalled 6,916, of which 5,627 were general and 1,289 were tuberculosis cases. The average length of stay for general cases was 14.8 days. Tuberculosis cases accounted for 22.2 per cent of admissions, 18.8 per cent of discharges, and 86.8 per cent of patient days in departmental hospitals. At the end of 1950, 75 per cent of all Indian Health Service Hospital beds were occupied by tuberculous patients. About 60 per cent of all hospitalized tuberculous cases were hospitalized in departmental institutions and another 10 per cent in mission hospitals in the Northwest Territories, where they were attended by Indian Health Service medical officers.

Admissions to non-departmental hospitals totalled 16,038 during 1950, and patient days numbered 688,173. About six per cent of the new admissions reported were for tuberculosis. Nearly 43 per cent of the total patient days in non-departmental hospitals were for tuberculosis. Thirteen per cent of total days were accounted for by patients in mental hospitals.

Admissions to departmental and non-departmental institutions totalled 23,075 not including new admissions covered by the British Columbia Hospital Insurance Service; 2,539 or 11 per cent were tuberculosis. The admission rate was 159 per 1,000 population or 142 admissions per 1,000 not including admissions to mental hospitals and tuberculosis sanatoria; there was nearly one admission to hospital for every six Indians and Eskimos living in the country.

The overall total volume of hospitalization was 1,317,374 patient days. Close to two-thirds of this total or 842,125 days was for hospitalization of tuberculosis patients. Nearly 90,000 days were for mental illness, and more than one-quarter was for other general conditions. The volume of hospitalization for tuberculosis represented 5.8 days per capita in the native population and for general conditions excluding tuberculosis and mental illness 2.64 days per capita.

*Medical Care.* In addition to physicians' services in departmental hospitals provided by 35 full-time doctors, treatment services were made available by 28 full-time departmental field medical officers as well as by senior medical students who were employed during the summer months to work under the supervision of departmental officers. The great proportion of medical care was supplied, however, by private practitioners, in areas where there was not a sufficient concentration of population to justify the employment of a full-time medical officer. Private practitioners were either appointed to a part-time position or remunerated on a fee-for-service basis. Professional services were supplied by 58 part-time physicians and 1,224 doctors on a fee-for-service basis.

Supplies of medicine are furnished as required to Indian Bands and Eskimo centres for the use of part-time field matrons and lay persons such as missionaries, traders, police and other officials who serve as

dispensers, many of whom provide care for the ill and do welfare work without payment.

*Field Nursing Service.* Field nursing, the front line in the struggle to protect the Indian and Eskimo against disease, was carried on by some 90 graduate nurses stationed at the smaller departmental hospitals, nursing stations and health centres, as well as by 40 part-time graduate nurses and practical nurses serving as field matrons. Arrangements were also made with provincial Public Health Nursing Services, the Red Cross, and the Victorian Order to extend their services to Indian Reserves.

Primarily, Indian Health Services nurses participate in case finding and public health work, visit schools and conduct clinics in pre-natal, infant and maternal care, first aid, and home nursing. At times, however, they must provide treatment when physician's services are not immediately available in isolated areas; usually this is done under the direction, by radio, of a medical officer. The dog-drawn sleigh and komatik, freight canoe and freight caboose, saddle and carry-all are frequently the only means of transportation available to the Department's nurses in northern districts.

*Dental Services.* Dental care was provided by 8 full-time dental surgeons, an increase of 3 from the previous year and, in addition, by about 124 dentists in private practice, on a fee-for-service basis. Reserves and schools were visited to provide dental attention and in some areas, particularly in Manitoba preventive fluorine treatment was applied to the teeth of younger children.

*Tuberculosis Services.* Indian Health Services have pioneered in the development of immunization techniques. In 1950, 5,605 native children were inoculated with Bacillus-Calmette-Guerin vaccine; a number of community hospitals in Quebec, Ontario, and New Brunswick vaccinated Indian babies regularly.

The tuberculosis case finding program of Indian Health Services has been progressively intensified during recent years. While the scattered population presents peculiar problems, advantage has been taken of special assemblies when the nomadic people come together at Christmas and Easter, the termination of the hunting season, and treaty payment time. During the year almost all Indian Residential Schools, most Indian reservations, and a number of Eskimo centres were covered by x-ray surveys. About 60,000 Indians and Eskimos were examined, and thousands of chest plates of metis and whites were taken. In addition to these surveys, a proportion of community hospitals where Indians are treated filmed all new admissions and information collected by provincial health organizations contributed to case-finding programs. In Manitoba an Indian Tuberculosis Registry was set up at the Central Tuberculosis Registry operated by the Sanatorium Board.

Departmental facilities for treatment continued to be expanded; at the end of 1950 out of 2,584 cases under treatment, 1,512 or 60 per cent were hospitalized in departmental institutions. Sanatorium treatment in Indian Health Service hospitals regularly includes pneumothorax and pneumoperitoneum procedures and the use of streptomycin and streptomycin with para-amino salicylic acid. Some 22,000 grams of streptomycin were used during the year along with 150,000 grams of PAS. Where useful results could be achieved, major chest surgery was undertaken. At Charles Camsell Hospital alone major chest operations totalled 266 as compared to 175 in 1949-50. Occupational therapy was provided and handicraft departments were operated in several hospitals.

Increasing attention is being directed to pre-admission supervision and post-sanatorium follow-up and rehabilitation. Special assistance was given in the form of supplementary diets for Indians convalescing from tuberculosis and to their families, through funds administered by the Indian Affairs Branch of the Department of Citizenship and Immigration; supplementary diets are provided to reduce incidence of relapse, to speed recovery of the breadwinner, and to educate Indians in the benefits to be derived from proper diet. Follow-up and rehabilitation work are difficult problems because of the scattered population and because the Indians are almost all engaged in manual occupations, whereas tuberculosis patients must generally be rehabilitated to non-manual work. Follow-up work was supervised by the nursing service, and use was made of local rehabilitation facilities.

*Other Communicable Disease.* In addition to the extension of BCG vaccination, established inoculations against diphtheria and whooping cough, typhoid-like diseases, and smallpox were given to every child who could be reached by the Service. Protection against the less common communicable diseases was not given routinely, but where there was obvious threat of spread.

Epidemics during the year were few and well controlled. Influenza was epidemic during the winter as in the general population, a few deaths being reported. There were measles epidemics at various places in Manitoba and five deaths occurred out of 505 cases. In August, 1950, an outbreak of severe common cold followed the visit of the supply ship to Fort Chimo, Quebec, three deaths occurring out of some 300 cases. Less venereal disease was reported. The Manitoba Regional Superintendency collected data on the exposure of Indians in Northern Manitoba to tularemia, a disease transmitted from wild animals.

*Health Education.* Health education work was undertaken by all members of the field staff of Indian Health Services. Aids frequently used were films, film strips, picture displays, posters, and reading material. Every effort was made to improve health standards by demonstration, example and gentle pressure, with special opportunities being taken through pre-natal and well-baby clinics, during tuberculosis surveys and follow-up visits. Material prepared by the Information Services Division was used extensively.

*Professional Education.* Several conventions and meetings were attended by departmental medical officers — especially the annual meeting of the Canadian Tuberculosis Association — and papers were read by departmental officers. A number of nurses were enabled to take special courses in public health and tuberculosis nursing, and staff officers at Indian hospitals gave courses of instruction to nurses, nurses aides, and orderlies.

*Co-ordination of Facilities.* Close co-operation existed between the officers of Indian Health Services, the Indian Affairs Branch of the Department of Citizenship and Immigration which is responsible for the welfare of Indians and of the Northern Administration and Lands Branch of the Department of Resources and Development which administers Eskimo affairs. Departmental administrative officers regularly function as local public health officials and Indian Health Services provided a family physician service.

As in the past, Indian Health Services acted as advisor on health matters to the Northern Administration and Lands Branch of the Department of Resources and Development with respect to the Northwest

Territories. Each year Indian Health Services provides medical care to remote northern areas through a medical officer on board the C.G.S. C. D. Howe, during its Eastern Arctic Patrol. On the 1950 patrol, the medical officer was accompanied by a dentist, an x-ray technician and a medical attendant. More than 1,000 Eskimos were x-rayed, and hundreds received medical attention and dental treatment.

Treatment services were exchanged with the Department of Veterans Affairs and the Department of National Defence whenever such arrangements were advantageous. The transport facilities and signal services of the Department of Transport and the Department of National Defence were used extensively—particularly for purposes of emergency medical care in the north. The services of private air operators and commercial licensees were also extended generously when required for medical missions. Provincial health departments assisted in case finding and preventive public health work. As ever the main burden of active treatment was carried by local practitioners and community hospitals whose untiring efforts contributed greatly to the success of the common endeavour on behalf of the Indian and Eskimo.

### **Sick Mariners Service**

Through the Sick Mariners Service the Department provides medical care and hospitalization for crew members of all foreign-going ships arriving in Canada, for crews of coastal vessels in the interprovincial trade and, on an elective basis, for crew members of fishing and government vessels. Treatment authorized under authority of Part V of The Shipping Act has been provided in various forms since 1867 and is available, for all conditions except prolonged mental illness, up to a maximum period of one year.

Sick Mariners' Dues are levied by the Collector of Customs on every ship arriving in any port in the provinces of Nova Scotia, Prince Edward Island, New Brunswick, Newfoundland, Quebec, British Columbia, and in ports bordering on Hudson Bay and James Bay in Manitoba and Ontario. During the year under review, the amount of Sick Mariners' dues collected was \$236,056, with the cost of treatment extended being \$442,810.

Conditions under which treatment is obtained are kept as simple as possible. The sick seaman applies to the captain of his vessel, who sends him to the collector of customs with a written statement, on concise forms provided for this purpose, setting forth length of employment on the vessel and details regarding Sick Mariners' dues paid. The patient is then referred to the port physician or hospital designated for the treatment of sick mariners. Emergency cases are taken directly by ambulance from the ship to the hospital.

Of a total crew membership of 93,188 on vessels arriving at Canadian ports during the year, the Sick Mariners Service provided treatment for 22,874; 24,823 were treated the previous year.

At Vancouver, Quebec, Saint John and Halifax sick mariners clinics were operated at locations convenient to waterfront facilities. Patient visits during the year numbered 10,863, a decrease of 801 as compared to 11,664 in the previous year. In the smaller ports and hamlets, sick mariners, the bulk of whom are fishermen from very small vessels, were treated by port physicians working on a fee for service basis. The number of treatments given was 20,123, a decrease of six per cent from the 21,464 treated the previous year. At ports intermediate in size, such as

Port Alberni, Victoria, Port Alfred, Lunenburg and Yarmouth, sick mariners were treated by port physicians working on a part time salary, based on work performed. Treatments numbered 19,083, a decrease of 10 per cent compared to the 21,529 treatments given the previous year. In the 150 hospitals treating sick mariners the total cost of hospitalization amounted to \$331,507, with the average per diem cost per hospital day being \$7.57 as compared to \$7.10 the previous year.

Considerable success was noted during the year in the treatment of acute forms of tuberculosis with paraminosalicylic acid, combined with streptomycin or dihydrostreptomycin. Patients requiring specialized treatment or facilities which were not available in the smaller ports, were transferred to centres where necessary treatment could be obtained.

During the year a new sick mariners clinic was completed in Montreal and commenced operations when navigation opened on the St. Lawrence River in 1951. In December, the sick mariners clinic at Saint John was destroyed by fire. Fortunately the new clinic quarters in the new Immigration Building, at West Saint John, were ready for occupancy, and the activities of the clinic could be transferred immediately. During the year new electro-steam sterilizers were installed in sick mariners clinics at Vancouver and Halifax, and in February the Halifax clinic was renovated and enlarged, provision being made for two much needed private examining rooms and for an enlarged and suitably furnished patient's waiting room. An additional physician was added to the staff of the Vancouver clinic, which continued to be the busiest out-patient unit.

Statistical data on the Sick Mariners Service is contained in Table 21, on page 122.

### **Leprosy**

During the year the Department continued to make full use of the newer drugs available for the treatment of leprosy, and favourable results were obtained in certain early cases.

Nine patients were under treatment during the year, two at the federal hospital at Bentinck Island in British Columbia and seven at the Hotel Dieu de St. Joseph Hospital at Tracadie in New Brunswick. At the latter institution, which is assisted by a federal grant, a modern 12 bed wing is operated as a leprosarium, facilities are available for recreation and occupational therapy, and patients have the freedom of a large property, including a strip of seashore.

There were no admissions and no deaths during the year. One new case of leprosy, a Maltese male, was legally committed and awaiting admission at the end of the year. One patient was discharged from Tracadie as arrested and non-infectious, but is continuing treatment under medical supervision, as a precaution against recurrence.

Of the six patients remaining in hospital at Tracadie four were under active treatment and showed signs of active leprosy in varying degrees. Two were considered as arrested cases but required permanent institutional care. Four of the patients remaining at Tracadie were males and two were females. Three were of French-Canadian origin, two of Russian ancestry (one Canadian-born) and one Chinese. Both patients at Bentinck Island were Chinese males.

## VI EXAMINATION SERVICES

### *Quarantine*

The Quarantine Service, the oldest health activity of the federal government, is operated under authority of the Quarantine Act for the purpose of preventing the entry of infectious disease into Canada. All persons coming from abroad are inspected immediately on arrival, with radio pratique being in effect for vessels other than those arriving from infected areas. No cases of smallpox, typhus, yellow fever, plague or cholera were found on vessels or planes arriving in Canada during the year, though these diseases were present in countries from which many had departed. On August 2nd, 1950, the Quarantine Regulations were amended to require immunization against smallpox of susceptible persons entering the country.

Organized Quarantine stations for the inspection of vessels are located at William Head, B.C., with sub-stations at Vancouver, Victoria and Esquimalt; at Quebec, with sub-stations at Rimouski, Port Alfred, Sorel, Three Rivers and Montreal; and at Saint John and Halifax. A full time service is also operated at Dorval and Gander airports and the services of medical officers for inspection duties are available at Harmon Field, Stephenville, Newfoundland, at Reserve Airport, Sydney, at Dartmouth, Moncton, Malton and Victoria and at Sea Island Airport, Vancouver.

During the year 421 vessels applied for duplicate pratique and 1,708 for radio pratique. Local customs officers, in their capacity as quarantine officers at unorganized ports, reported the entry of 502 vessels. A total of 2,505 vessels, having on board 306,854 persons, 157,468 of whom were crew members, 149,243 passengers, were inspected by medical officers of the service. In addition, 2,039 aircraft carrying 51,514 persons were inspected on arrival from abroad. Of a total of 862 vessels inspected for vermin and rodents 543 had come from plague infected ports. Eighty-eight vessels were fumigated; 361 were granted exemption certificates; 263 had their certificates endorsed and 145 were remanded to other ports. A total of 263 rats and 126 mice were recovered.

In addition to the fumigation of merchant vessels, officers of the Department, on request, fumigated various ships and shore establishments for the Royal Canadian Navy, the Marine Section of the R.C.M.P. the Marine Branch of the Department of Transport, the Pilotage Service, and the Immigration Branch of the Department of Citizenship and Immigration.

Additional duties carried out by Departmental officers included the medical examination of pilots, light-house keepers, radio operators and other civil servants serving in remote areas, immigration medical examinations, the treatment of sick mariners and the pre-employment and periodic examination of marine personnel employed by the Department of Transport.

International Certificates of Inoculation and Vaccination were prepared in booklet form for distribution to persons travelling abroad; the demand for these greatly increased during the year.

The number of centres at which yellow fever inoculations may be obtained was increased during the year to fourteen and a total of 936 inoculations were carried out. Centres are now located in St. John's,

Halifax, Saint John, Quebec, Montreal (2), Ottawa, Toronto (2), Winnipeg, Regina, Calgary, Edmonton and Vancouver.

Statistical data on quarantine activities are contained in Tables 19 and 20 on pages 120 and 121.

### *Immigration Medical*

The Department's responsibility for the medical examination and treatment of immigrants is laid down in the Immigration and National Health and Welfare Acts. Its immigration activities extend to Hong Kong to the west, to Europe and to India and Pakistan in the east; they include the medical screening of prospective immigrants, medical and hospital services to immigrants when required, and the provision of medical advice to the Department of Citizenship and Immigration on immigration questions.

The vast bulk of immigrants were first examined abroad by Canadian medical officers; others by approved local physicians. In addition, as an added protection, all immigrants were again examined on arrival in Canada. At Canadian seaports and airports modern treatment facilities were maintained for persons arriving in Canada who were ill and unfit to travel to their destinations, and for those suffering from obscure or undiagnosed conditions requiring observation for diagnosis. Necessary hospital costs are chargeable to the transportation company which brings the person to Canada.

Full time Canadian medical officers were stationed in the British Isles, at London, Liverpool, Glasgow and Belfast, and on the continent at Paris, Brussels, The Hague, Salzburg, Stockholm and Rome. Six Canadian medical officers worked with immigration teams in Germany, at Bremen, Fallingbomel, Karlsruhe, Hamburg and Ludwigsburg. Canadian medical officers will soon be carrying out examinations in Denmark and, on a more temporary basis, in a number of other places where groups of persons seeking entry to Canada could be gathered for screening. During the year the number of full time medical officers serving abroad was increased from twenty-four to thirty-three and, in addition, local roster doctors were employed throughout the British Isles, in different countries on the continent of Europe, and in Pakistan, India and Hong Kong.

All medical examinations by Canadian medical officers were performed without charge to the immigrant, and commencing on August 15th, 1950, free x-rays were also provided at Paris, London, Liverpool, Glasgow, Belfast and Dublin. Chest x-rays have proved of considerable value in disclosing preliminary tuberculosis in a large number of cases where it could not have been detected by clinical examination.

During the year a total of 136,755 immigrants were medically examined abroad and 77,348 on arrival in Canada. Of the numbers examined 42,445 were from the British Isles, 92,076 from Europe and 2,234 from the Orient.

1,708 persons were refused entry for medical reasons. Statistical data on the Immigration Medical activities of the Department are contained in Tables 17 and 18 on pages 117, 118, and 119.

### *Civil Service Health*

The Department's responsibility for the conservation and promotion of the health of federal government employees is discharged through the Civil Service Health Division, which provides complete diagnostic and

health counselling services and emergency medical care for federal civil servants located in Ottawa, reviews sick leave certificates of all federal civil servants and acts in an advisory capacity to federal departments on health problems relating to government employees. Its services, which are provided as a part of, and in conjunction with, other components of community health and welfare resources, are directed primarily toward improvement of efficiency and productivity of the public servant, and through him to the exercise of the greatest possible influence on positive health education.

Since the establishment of this preventive program its value to federal departments, as well as the economy, efficiency and uniformity of practice resulting from unified control have become increasingly recognized. The seventeen health units now in operation which are staffed by 38 nursing counsellors, provide services to about 17,500 employees in the Ottawa area. During the past year the extension of full health services was completed for employees in the Ottawa area of the Post Office Department and the National Research Council.

Some indication of the extent to which diagnostic and emergency services have been increasingly utilized in the four years since the program commenced is shown by the increase in the average monthly number of health unit visits each year for every 100 persons to whom these services were available; from 33 during the first year of operation to 40 in the second, to 58 in the third and to 65 in the past year. A total of 136,941 visits, an increase of about 20,000 over the previous year, about 7,000 of which were accounted for by the two new units, were paid to the health units; 94,000 or 70 per cent were first visits, or visits resulting from new disabilities. The ratio of males to females visiting the units was 4:5, which is of interest when considered in relation to the fact that 53 per cent of civil servants covered were males, 47 per cent females.

Of the total visits some 20 per cent required special investigation into socio-economic or welfare factors. The number and proportion of cases requiring some form of social service have increased as this work has become known to employees and departments. Activity in this field must necessarily be limited by the amount of nurses' time available. One of the most difficult achievements, and one demanding a high degree of skill and judgment on the part of the Nursing Counsellor, is imparting to the patient, while avoiding paternalism, enough special knowledge and assistance to permit him to deal adequately with his own problem. The services of the psychologist have been increasingly important in assisting the nursing counsellors to improve these skills. He is called upon to investigate and furnish advice and assistance on a wide variety of personnel problems, relating chiefly to job efficiency and adjustment, suitable placement of neurotic or physically handicapped employees, assessment of fitness for continued employment, vocational guidance to youthful or dissatisfied employees and employees not making the most of their capabilities, and to the reorientation of attitudes of maladjusted employees. During the past year he has conducted over two thirds of his interviews in the health units, so as to enter into the working environment of the employee, to bring the nursing counsellor, when necessary, into the picture, and to reduce employee time loss.

Of particular significance is the fact that only 2.7 per cent of persons visiting the units were unable to return directly to their work after receiving assistance. The slight increase in this figure over that of the past year may be attributed to the widespread outbreak of the mild form of influenza which reached its peak during the third week of February.

Respiratory, digestive, menstrual disorders, and diseases of the skin and cellular system, in that order, predominated among reasons for calls at the units. The ratio of respiratory to digestive disorders for the entire fiscal year was just over 2:1, a slightly higher ratio than in the previous three years, due largely to the influenza epidemic. Nutritional problems continue to show a relatively high incidence and the specialized facilities of the Nutrition Division are available for assistance in individual nutrition problems. Diseases of the circulatory system, of the nervous system and of the bones and organs of movement, in that order constituted the chief causes of separation on medical grounds from the public service. Of the total of 210 separations on medical grounds, 165 or about 80 per cent, were in the 50 to 60 year age group.

With the increase in health unit coverage in the Ottawa area it has become more important to maintain a strong clinical and administrative staff at the Division's Health Centre. This staff is small by current industrial medical standards; there is approximately one physician for every 7,000 employees. As a consequence, all examinations and consultations are made by appointment and, except for urgent cases, appointment bookings are filled for weeks in advance. During the year some 6,498 employees were referred to the Health Centre for examination, consultation, or treatment of emergencies by staff physicians and consultants. Both the laboratory and x-ray sections experienced a marked increase in work load. In all, 5,917 laboratory procedures were carried out, and 4,291 x-rays, including 3,300 chest films, were taken.

Statistical information on sickness absenteeism in the civil service is compiled and analyzed by the Public Health Section of the Dominion Bureau of Statistics. The results of this analysis will be the subject of a special report to be prepared by the Bureau in conjunction with the Civil Service Health Division. The program continued to be used as a demonstration unit by several of the universities and assistance was provided by the health service staff to a number of programs and conferences in both the health and welfare fields.

Detailed statistical information concerning the activities of the Division is contained in Tables 5 to 9 on pages 106 to 109.

### ***Civil Aviation Medicine***

The civil aviation medicine functions of the Department, which are carried on by the Civil Aviation Medicine Division, fall generally into two major classes; administration duties connected with the setting up and maintenance of physical standards for civilian pilots and aviation personnel, in which the Department acts in an advisory capacity to the Department of Transport; and general advisory duties and developmental work in the field of aviation medicine.

In the first of these two major functions the Civil Aviation Medicine Division reports directly to the Superintendent of Air Regulations of the Air Services Branch of the Department of Transport in passing on the fitness of pilot applicants and licence holders to assume or continue flying duties. The Division administers an aviation medical examining service consisting of 242 medical examiners who work on a fee for service basis; 32 new examiners were appointed during the year in districts where new flying activity had developed or where an appreciable increase in flying operations had occurred. During the year approximately 9,200 medical examinations have been screened and 950 electrocardiograms and approximately 550 audiogram reports on professional pilots have been reviewed.

Sixty-five examiners were given a six day refresher course at the Royal Canadian Air Force Institute of Aviation Medicine in Toronto, to bring the total trained in the past two years to 155. The object of this training has been to impart to examiners a broad concept of the scope of aviation medicine, some idea of the part it plays in safe air operations and more important, to improve assessment of the physical disabilities of pilots in relation to flight duties.

Five of seven authorized Regional Medical Consultant Boards have been set up at the request of the Department to render assistance in special borderline or contentious cases where expert clinical opinion supported by a reasonable knowledge of flight conditions is necessary to determine fitness for flying.

The second of the Division's major functions involved serving in a general advisory capacity on such subjects as flight time limitations for aircrew, emergency means of meeting explosive decompression at high altitudes, high altitude training for civil photographic survey operators, the initiation of psychological studies intended to improve commercial and transport pilot selection, and advice to interested organizations in the field of air ambulance requirements and limitations. Studies are to be continued in the development of satisfactory airport crash emergency arrangements, where the Division acts as a co-ordinating unit between the major operators, Air Services and the Canadian Red Cross.

In the field of physical standards and requirements for aviation personnel generally studies have been made of existing standards for hearing ability of commercial and transport pilots, and of colour perception requirements in effect for private pilots, with a view to the possibility of downward revision in the light of advances and improvement in the technique of flying and in navigational aids. The first of these studies has been approached through a survey of the past flying history of 1,000 commercial and transport pilots, in conjunction with testing by pure tone audiometer, the second by attempting to institute routine colour perception flight tests for applicants for private pilot licences who fail the routine clinical test by only a marginal degree.

Particularly close liaison has been maintained with the R.C.A.F. in using service assistance and facilities to present refresher training in aviation medicine, in assessing medical examinations for the service in the Air Cadet Scholarship Flying Training Programme, in screening the service medical examinations of former R.C.A.F. instructors currently being trained under the terms-of-reference of "Operation Chipmunk" and finally in a free interchange of clinical histories and examination results.

## VII

## INSPECTION AND ENFORCEMENT SERVICES

*Food and Drugs*

The Food and Drugs Act and the Proprietary or Patent Medicines Act govern the safety, purity and quality as well as the labelling and advertising of all foods, drug and medicines sold to the public in Canada. Both acts are administered by the Food and Drugs Divisions of the Department, with assistance, in the case of enforcement activity and the drafting of legislation and regulations, from the Department's Legal Adviser.

The year 1950 marked the seventy-fifth anniversary in Canada of the enforcement of legislation to protect the consumer from adulteration of food, drink and drugs. The first Act was passed in 1874 and enforcement began on January 1, 1875. This Act, the first of its kind in the western hemisphere, has had considerable influence on the development of the food and drug industry in Canada as well as on legislation in other countries; it is subject to continuing review and revision in the light of changing conditions. The introduction of new foods, new drugs and new processes, and the development of advertising methods, make necessary the constant revision of control requirements. Constant liaison with other enforcement agencies is necessary if duplications and gaps in enforcement activity are to be prevented; active collaboration must be maintained with other countries if the quality of imports is to be kept at satisfactory levels; effective working relationships must be maintained with industry in the drafting of standards and regulations.

During the year there were a number of new developments in the administration of food and drugs work. Through agreement with the Department of Agriculture the registration of disinfectants under the Pest Control Products Act was discontinued as of December 31, 1950, and marketing of these products is now governed by the Food and Drugs Act. At the request of the Department of Agriculture and in co-operation with their inspectors the Department commenced screening drug products offered for veterinary use.

A Guide for Manufacturers and Advertisers was issued to present, for the information of the trade, the Department's interpretation of the Food and Drugs Act and Regulations in relation to advertising.

As a result of an inspection of English firms licensed under schedule B of the Act for the manufacture of certain drugs, conditions of manufacture were found to range from excellent to very bad and, on the strength of the inspecting officer's report four licences were cancelled.

During the Red River Valley flood the services of the West Central Regional Branch of the Food and Drugs Division were placed at the disposal of provincial and local authorities and the Central and Regional Branches assisted in inspection work following the flood.

The Food and Drugs Act was proclaimed on July 15th, 1950, in Newfoundland, where development of administration procedures will require much time and study because of travel and communications difficulties.

A more flexible scheme for the use of scientifically qualified inspection staff in laboratory work was introduced. The establishment of two laboratories in the inspection offices in Saint John, and St. John's, was planned, to obtain more rapid examination of import shipments and a preliminary study was begun to determine what actual analytical and

examination work can be done in inspection offices, with the two-fold object of reducing the number of samples sent to regional laboratories, thus releasing staff for other duties, and of giving quicker service to the public.

Assistance of a technical or enforcement nature was given to a number of government departments and agencies, including the Department of Agriculture, the Department of Fisheries and the Royal Canadian Mounted Police. Canadian and International Standard preparations, used in the assay of drugs, were distributed to manufacturers and research institutions on request.

Since the Food and Drugs Act is international to the extent that it applies to imports, the Department takes an active interest in legislation and standards and methods of analysis of foods and drugs in foreign countries and by international or foreign authorities, including the World Health Organization, the United Nations Narcotic Commission, the British and United States Pharmacopoeia Commissions, the Association of Official Agriculture Chemists, and the United States Food and Drug Administration. At a joint meeting of the American and Canadian Bar Associations, in September, a proposal was made by the Minister for more uniform food and drugs legislation in the interests of international trade. The Director, Food and Drugs Division, also asked for greater uniformity of food and drug standards, labelling and nomenclature.

### *Enforcement*

Enforcement action may take one or more forms, depending on the circumstances of each case, and may consist of warnings, seizures or prosecutions. During the year 1452 warnings were issued, 84 seizures of stocks of foods or drugs were made, and 188 prosecutions carried out.

Special efforts are being made to enforce the regulations requiring that certain pharmaceuticals such as barbiturates and sulfa drugs, be sold to the public only on prescription or, in the case of veterinary use, under other specified restrictions. Some prosecutions were found to be necessary to emphasize the seriousness of this matter.

The "molasses for health" fad, which grew to fantastic proportions during the year, presented a number of difficult problems, as vendors, without advertising, themselves found a tremendous market had been built up for this product through sweeping claims regarding its virtues as a cure for a surprising number of human illnesses that were made in a popularly priced and widely distributed book. This ready public acceptance of claims made by a writer untrained in health work emphasizes the need for close inspection of all advertising of food and drugs. While vendors generally made no claims themselves, one, who did advertise that "If you suffer from heart troubles, high blood pressure or gall stones, try crude molasses", was prosecuted under Section 6A of the Food and Drugs Act. Conviction was refused on the grounds that a recommendation to "try" a product was not a recommendation for treatment. The case was appealed and a conviction obtained.

Court action was taken in a number of other cases where fraudulent claims were made. Convictions obtained against a Montreal firm are of general interest because they involved the advertising of an appliance, rather than a drug. Prior to the 1939 amendment to the Act which made it possible to take action in such a case, it would not have been possible to have laid a charge in this instance, the first of its type which has arisen since the amendment came into force. Convictions were obtained under Section 6A of the Food and Drugs Act for representing an appliance by

label and advertisement as treatment for a wide number of diseases, under Sections 32 and 32A for improper labelling and misleading advertising and under Section 406 of the Criminal Code, for having advertised it without having conducted adequate tests of its efficiency.

A number of butchers and vendors in the Ottawa district were prosecuted for selling horsemeat; it is an offence to sell horsemeat without clearly labelling it as such, or to use it in the manufacture of sausages or to use it or any other meat, except beef, in hamburger steak. As it was apparent that the vendor had often acted in good faith, believing his product to be beef, Section 24 of the Act was invoked to bring charges against the wholesaler or supplier as third party.

Failure to obtain conviction against a Cornwall cheese factory for violation of cheese-holding regulations revealed weakness in regulations, which are now under study. As a result of a case where 2,800 gallons of maple syrup seized in Quebec were found to be adulterated with cane sugar, conferences were held with the federal and provincial departments of agriculture, and methods of close co-operation developed.

Other enforcement activities which have some general interest include efforts undertaken to improve cleanliness in small canneries doing a local business and flour mills which have been inspected for cleanliness and where samples have been examined—as a result of preliminary work it is evident that much remains to be done in this large field. Several large import shipments of dried fruits and nuts were refused entry because of insect infestation and other filth. It is apparent, however, that examinations and past refusals are leading to a better quality of this kind of food being offered for import into Canada. Special attention is being given to food colours, some of which in the past have represented a definite health hazard. This year, a shipment of 150 pounds of food colour imported from England was found to be of a kind not permitted in foods and was returned to the exporter.

### **Scientific and Technical Studies**

Scientific and technical studies related to food and drug legislation may be divided into five classes: development of analytical methods and standards; surveys of the labelling and advertising of nationally or locally advertised products; fundamental research, including studies of the action of new drugs or chemicals used, or intended for use, in food; and routine analyses of samples where adulteration or misbranding is suspected and surveys of various products collected from all parts of Canada, both of which functions are chiefly carried on by the regional laboratories and are summarized in Tables 10, 11, 12 and 13, pages 110 to 113.

*Development of Analytical Methods and Standards.* Work to develop new methods of assay and new standards for foods or drugs occupied a large proportion of the time of the central laboratory in Ottawa, with some assistance from the regional laboratories.

*Surveys of Labelling and Advertising.* A survey of labelling of analgesic products was concluded in 1950, with a total number of 355 labels being examined. Appropriate action to have the labelling corrected was taken where necessary and some statistical data regarding the composition of these products was obtained. Other surveys were carried on of the labelling of antihistamines, vitamin specialties, cod liver oil and emulsions and cocoa and chocolate products. A survey of labels by companies was commenced and work on the pharmaceutical products of eight companies has been completed.

*Information and Reports.* The Information Centre, in its third year of operation, has prepared and issued 19 Trade Information and 36 Staff Information Letters and issues weekly reports on detained imports of foods and drugs. The cataloguing of all drugs manufactured in Canada, including the collection of specimen labels, was undertaken during the year.

### **Fundamental Research**

*Food Chemistry.* A method was developed for determining antioxidants in lard and shortening, the manner in which antioxidants react during storage was studied and a chromatographic method for determining monosodium glutamate (a substance used to enhance flavour) in foods was developed.

A collaborative study was commenced with the Association of Official Agricultural Chemists to determine starch in meat products and a determination of metallic contaminants in gelling agents was continued.

Analyses of service rations including determination of their keeping qualities were carried out for the Department of National Defence. Work on methods for determining fill of containers for dry products (tapioca, rice, etc.) and canned fruits and vegetables was carried out. A method for the first group of foods has been developed and a study of the filth and bacterial content of flour and canned chicken (including field surveys as well as laboratory work) was begun.

Work to establish a standard for bone flour was begun.

*Vitamin and Nutrition.* Surveys on the vitamin content of margarine and liver extracts have been completed.

Collaborative studies were conducted with the United States Pharmacopoeia Revision Committee on vitamin B<sub>12</sub> methods as well as with the federal Department of Agriculture on stock feeding oils for vitamin A. A survey was carried out of products containing vitamin B<sub>12</sub>. The material included liver extract, solutions and tablets of vitamin B<sub>12</sub> and concentrates obtained in the manufacture of antibiotics. Eight different procedures for the determination of vitamin C were studied and the one most convenient, which at the same time gave the necessary accuracy, was chosen for routine work. The study of the biological method for the assay of vitamin D was continued. It was found that the animal protein factor added to yeast gave four or five times the growth in the test animals as the present basal diet. This is probably due to vitamin B<sub>12</sub> in the APF. Biological and chemical methods for determining vitamin E in some materials are under investigation.

*Alcoholic Beverages, Cosmetics and Food Colours.* Standards of purity were laid down for the seventeen permitted food colours. This involved the complete analysis of many samples and investigation of the best methods of determining arsenic, lead and other metals in the colours. Surveys of the composition of tooth pastes, face powders and deoderants were also undertaken.

A determination of the characteristics of imported West Indian rum was commenced. The absorption in the ultra-violet of distilled beverages has produced interesting results.

*Physiology and Hormones.* A standard for the adrenocorticotrophic hormone (ACTH) was nearly completed and methods of assay are being studied. Studies of the effect of ACTH have been done on the blood eosinophil cells, adrenal cholesterol and phosphorus and blood phosphorus levels. The biological assay and chemical determination of cortisone are

being examined. A study of the possible correlation between the histamine-histaminase system and adrenal function is under way.

The mouse convulsion test for insulin has been improved. The methods for determination of oestrogenic substances in poultry for enforcement of regulations forbidding its use were investigated and studies on the effects of continuous administration of oestrogens to rats were begun.

Collaborative work was continued with the Association of Official Agricultural Chemists on colorimetric methods for steroid oestrogens and stilboestrol.

*Pharmaceutical Chemistry.* Because current methods for determining ephedrine have been found unsatisfactory, a new colorimetric method has been devised, which it is intended to announce shortly.

Surveys of Fowler's Solution, iodine preparations sulphathiazole, and antihistamines on the market have been conducted. Assay procedures for Fowler's Solution, iodine, and sulphathiazole have been studied and improvements established in those for iodine and sulphathiazole.

Standards for weight variation in tablets and disintegration times of tablets are being considered in the light of work carried out this year.

*Pharmacology and Toxicology.* Preliminary work shows that roosters may be a more reliable test animal for veratrum alkaloids than cats or dogs.

Experiments have disclosed quite wide differences in both sedative and local anaesthetic properties of various antihistaminics.

Studies of gitalin, a cardiac drug, have shown significant differences in the potency of experimental lots.

Reported differences in the results of the assay of oxytocin by uterine and chicken blood pressure methods have not been substantiated.

Chemical and bioassay methods for d-Tubocurarine chloride give comparable results.

Toxicity studies of the antioxidants, nordihydroguaiaretic acid and propyl gallate, show that their disintegration products were not more toxic than the original compounds.

It was demonstrated that antabuse *in vitro* is a very powerful inhibitor of liver aldehyde dehydrogenase, functioning in this respect by apparently competing with diphosphopyridine nucleotide for active centres of the enzyme. Ascorbic acid (vitamin C) and reduced glutathione were effective in reversing the inhibition. Antabuse increases the hypnotic effect of barbiturates.

*Organic Chemistry.* Ion exchange resins have been used with promising results in the quantitative analysis of narcotics.

Porphyroxine-meconidine is being used as an indicator along with other factors to determine the country of origin of opium, a problem undertaken for the Narcotic Commission of the United Nations.

*Biometrics.* Statistical studies of sampling techniques for dried fruits, canned goods and cereal products were carried out.

*Animal Colony.* There were 16,369 rats, bred in the laboratory animal colony and used for experimental work as well as 733 animals of other species.

### **Proprietary or Patent Medicines**

The sale in Canada of proprietary medicines is governed by the Proprietary or Patent Medicine Act, administered by the Proprietary or Patent Medicine Division, under which all proprietary medicines offered

to the public must be registered. The sale of all registered preparations is licenced on a year to year basis so that if experience in use or advances in medical knowledge make it apparent that it is not in the public interest to permit further sale, further licencing may be refused. Formula and recommendations for use are passed on by medical officers of the Department in all cases before registration or licence is granted. An Advisory Board of outstanding physicians and pharmacologists, appointed under Section 9 of the Act, passes on what drugs may be used with safety, prescribes limitations when necessary, passes on whether medication of liquid medicines containing alcohol in excess of 2½ per cent is appropriate and sufficient to unfit them for use as alcoholic beverages, advises on and fixes dosages for scheduled drugs, and investigates the suitability of unusual combinations of drugs. At meetings held during the year formulae are reviewed and problems are discussed with manufacturers.

During the year the registration of 3,836 preparations were reviewed. Two hundred and fifty-two new medicines were examined for registration; 157 were approved and 95 rejected. One thousand nine hundred and thirty labels, wrappers and newspaper advertisements were examined. In addition, approximately 10,225 individual radio commercials were reviewed for the Canadian Broadcasting Corporation, which requires that all radio announcements dealing with proprietary medicines be passed on and that any false, misleading or exaggerated statement be corrected or deleted.

Assistance continued to be given to manufacturers in the preparation of labels and advertisements.

Samples were secured on the open market, and examined as to quality and quantity of drugs and labelling, with the Inspection Service throughout Canada of the Food and Drugs Divisions contributing by procuring samples and reporting irregularities in advertising and methods of merchandising.

### **Narcotic Drug Control**

Departmental activity in narcotic drug control work, carried on through the Division of Narcotic Control, includes maintenance of control over narcotic drugs required to meet domestic needs and co-operation with the R.C.M.P. and other enforcement agencies in suppression of illicit traffic.

Addiction is known to have increased during the year, partly due to the availability of substantial quantities of heroin which have been smuggled into the country, and partly to general high levels of prosperity and consequent increased earning power of addicts and potential addicts. It is known that little if any of the heroin imported for medical requirements has been diverted for illicit use, yet enforcement officers are continuing to encounter substantial amounts of this drug. The ease with which it can be obtained illegally, combined with its satisfying addiction properties, has resulted in heroin to a large extent replacing opium and morphine in illicit traffic.

Control over the import, export and distribution of legitimate narcotic supplies continues to be exercised through the licensing system administered by the Department. Licences are granted only to approved wholesalers and provide for restriction of sale to hospitals, physicians, dentists, pharmacists and veterinary surgeons. During the year licences were granted to 152 distributors. Licensed distributors are required, under the terms of the Opium and Narcotic Drug Act, to maintain complete records of all narcotic drug transactions. Regular inspections, in-

cluding audits of stock and records, were conducted by three Departmental narcotic auditors to ensure that all transactions were executed in the proper manner. Detailed monthly reports of transactions in narcotics are made to the Department by licensed wholesalers, and individual records are maintained for each hospital, physician, pharmacist or other person authorized to distribute the drugs, so that it is possible to detect the development of misuse or abuse.

To supplement information received from monthly reports by licensed distributors, the Division also made a careful check of over 5,000 reports from retail drug stores across Canada. All stores were required to forward at least one report covering a three-month period, with retail druggists in larger urban centres such as Montreal, Toronto, Winnipeg, and Vancouver, being requested to supply two reports. In addition, Departmental auditors inspected narcotic security measures in over 1,000 hospitals during the year, and many interviews were held with professional persons and officials of firms interested in narcotic matters.

In May, 1950, a new type of duplicate-page narcotic register for the recording of narcotic transactions by all retail pharmacies was introduced and has proven of considerable assistance to druggists in reporting to the Department, as it is only necessary to tear out and forward the pages covering the period for which a report is required.

As basic narcotics are not manufactured in Canada, considerable responsibility devolves on the Department for ensuring that sufficient supplies are maintained to meet the medical needs of the population. During 1950 a total of 144 import licences were granted, including authority for the import of the following quantities of narcotics, in terms of pure drug: opium, 2,889 ounces; Morphine, 2,337 ounces; heroin, 748 ounces; cocaine, 1,344 ounces; codeine, 93,269 ounces; and demerol, 5,480 ounces. Thirty-nine export licences, largely to the British West Indies, were also issued during the year.

The total number of convictions under the Opium and Narcotic Drug Act during the judicial year ended September 30th, 1950, was 360. Possession of drugs was the most common offence, with 342 convictions being registered. Thirteen convictions were for selling or offering for sale. In addition to convictions under the Opium and Narcotic Drug Act, there were also ten convictions under the Canadian Criminal Code, for conspiring to sell, possess, or distribute a narcotic. Six convictions were obtained under the Habitual Criminal Section of the Criminal Code, under which persons convicted are sentenced to an indeterminate term of imprisonment. Of the 360 convictions under the Opium and Narcotic Drug Act, 173 were in British Columbia. In contrast, there has been very little narcotic addiction uncovered in the maritime provinces. A marked increase in the number of cases in Alberta has occurred: 45 as compared to 23 the previous year.

There was no increase in the number of females associated with illicit transactions, with the ratio of male to female convictions remaining at about five to two. There does, however, appear to be a lowering in the average age of new addicts; a number have come to the attention of enforcement officers who were in their early twenties, and some in their teens.

A decrease in the number of thefts of legitimate domestic narcotic supplies was noted, though this may be attributed, in part at least, to substantial quantities of narcotics, particularly heroin, being smuggled into the country.

In addition to control of narcotics within Canada all required information in respect to narcotics was furnished to the United Nations Narcotic Commission. Quarterly reports of imports and exports were supplied as well as complete statistics covering consumption figures and estimates of narcotic requirements for the coming year. Arrangements were made for an annual summary to be forwarded to the Commission, showing quantities of drugs imported into and exported from the country, amounts of narcotics seized from illicit channels and other items of interest which might assist in international control. Reports covering seizures of narcotics and sentences imposed on convicted persons were also submitted to the Secretariat of the United Nations together with a brief history of the circumstances surrounding each case, so that narcotic authorities in other countries could be made aware of the procedures followed by traffickers in Canada.

Statistical information on narcotic drug control work is contained in Tables 14, 15 and 16 on pages 114, 115, and 116.

### ***Public Health Engineering***

Departmental activity in the fundamental public health field of environmental sanitation includes both the carrying on of direct programs, administered through the Public Health Engineering Division, and assistance to provincial programs through the General Public Health Grant.

The programs administered by the Department are concerned with the control of those phases of environmental sanitation which may affect the health of persons travelling by, and operating personnel of, railway, ships, and airlines; persons visiting national parks and other federal property such as airports; and federal employees. In addition, the department is responsible for the enforcement of international requirements governing the handling and shipping of shellfish. Federal legislation authorizing this work is contained in a number of acts, notably the Department of National Health and Welfare Act, 1944, with particular reference to Section 5(a), (d), (e) and (f), The Public Works Health Act, and in regulations concerning water for drinking and culinary purposes on common carriers, and the inspection and supervision of the handling and shipping of scallop meat.

Generally, Departmental activities involve the supervision of water supplies owned by common carriers, such as railways, or by the federal government; ice supplies used by railways for chilling food and drink; sewage and the disposal of sewage, garbage and other wastes on federal property; sanitation on the right-of-way of inter-provincial and international railways, including stations, bunkhouses, work camps and restaurants; working conditions in federal offices, including questions of lighting, ventilation, and space; sanitary conditions affecting shellfish growing areas in the Atlantic provinces; sanitation in shellfish shucking plants; and pollution of boundary waters between Canada and the United States.

The conduct of this work, which requires a broad knowledge of engineering practices and treatment methods, involves the use of sanitary surveys and examination of sources of supply, treatment processes and control methods. When requested, designs of sewage disposal plants and water treatment plants are prepared, including the necessary plans, and, in some instances, construction is supervised. By collecting and submitting samples for analysis, a constant check is maintained on the quality of water supplied to the public on common carriers and on federal prop-

erty. Sanitation problems in the Yukon and Northwest Territories, including problems caused by mine tailings and stack fumes and concerning water supply and sewage disposal, constitute an increasingly important part of this work.

The Department's activities involve active co-operation with officials of provincial health departments, the United States Public Health Service and numerous committees and organizations concerned with problems of mutual interest. Federal departments such as Fisheries, National Defence, Public Works, Transport, Veterans Affairs, Citizenship and Immigration, and Agriculture, are assisted in problems arising in connection with different aspects of public health engineering.

By agreement between the Department, the Department of Fisheries, and the United States Public Health Service, requirements governing the taking, handling and shucking of shellfish for export to the United States have been established and are used as a guide in the administration of control measures in the shellfish industry. Certificates for the export of shellfish are issued when compliance with these requirements is obtained.

Some major activities during the year included 479 sanitary surveys of water supplies, ice supplies, shellfish growing areas, etc.; the collection of 6,234 water samples for analysis; 764 examinations of railway property, including stations, bunkhouses, work camps, coach yards and restaurants; and 80 examinations of sewage treatment plants, to check the efficiency of operating procedures and control.

The addition of several professional engineers to the staff of the Department has resulted in a considerable increase in the volume of work which can be handled, and better control of sanitation in several fields, particularly in the shellfish industry, but many problems still require more attention than it has yet been found possible to devote to them.

## WELFARE BRANCH

### INTRODUCTION

The main divisions of the Welfare Branch are those of Family Allowances, Old Age Pensions, and Physical Fitness. As Family Allowances is a federal program, the division has full responsibility for its administration. Old Age Pensions and Physical Fitness are joint federal-provincial programs and the Departmental divisions are responsible for its administration. Old Age Pensions and Physical Fitness are joint federal-provincial programs and the Departmental divisions are responsible for the federal participation in them.

The Welfare Branch expenditures were as follows:

	<i>Administration</i>	<i>Net Benefits</i>
Welfare Branch .....	\$ 30,116.51	
Family Allowances .....	1,811,854.01	\$309,465,460.52
Old Age and Blind Pensions .....	77,937.23	103,169,114.54
Physical Fitness .....	70,011.87	150,675.42
Schools of Social Work .....		52,500.00
Total \$414,827,670.10 .....	\$1,989,919.62	\$412,837,750.48

The highlight of the year was the development in the field of Old Age Security. The increasing volume of requests for changes in the provisions of the present act, particularly the means test and the age limitation, led to the appointment of a Joint Committee of the Senate and House of Commons on Old Age Security on which all parties were represented. Officials of the Department worked closely with this committee for over three months and were available at all sessions. They prepared the basic documentation and assisted in preparing the factual part of the committee's report. New legislation based on the recommendations of the committee was not introduced until after the period under review.

Additional responsibility was assumed with the transfer to the Department in February, 1951, of Civil Defence. There had already been set up in the Welfare Branch, under the Director of Family Allowances, Mr. R. B. Curry, a section for Civil Defence Welfare Planning. Mr. Curry was also appointed chairman of a civil defence Welfare Advisory Committee created to draw on welfare experience outside the Department. Mr. S. J. Bailey returned to the Department as administrative officer, Civil Defence Welfare Planning, and preliminary work was undertaken on a pamphlet dealing with the organization and co-ordination of provincial and local welfare aspects of civil defence. This will be the first of a series of pamphlets, later ones to deal with a number of specific problems.

The Welfare Branch continued to administer the Departmental grant to the eight Canadian schools of social work, made to assist the schools in relieving the shortage of trained social workers. The grant for the fiscal year was \$52,500.

At the request of the National Conference on Personnel in Social Work, approval was given for the conduct by the Department of a survey of the effective demand for social workers. The purpose of this survey was to assist the schools of social work in planning their training and to

aid the public and private agencies employing social workers in their staff development.

An amendment to the Excise Tax Act, passed in 1950, provided for the exemption from sales tax of public institutions devoted to the care of children, the infirm and the aged, if they were certified by the Minister of Health and Welfare to meet the requirements of the Act. This was in line with the certification of hospitals for exemption which is carried out by the Health Branch. Since the exemption became effective on July 1, 1950, 240 institutions have been certified and 129 applications have been refused because the institutions were unable to meet the requirements of the Act.

The Branch once again provided Canadian representation to certain United Nations organs. The Deputy Minister of Welfare, Dr. George F. Davidson, was alternate delegate at the tenth session of the Economic and Social Council held in New York, February 7 to March 6, 1950, and the eleventh session held in Geneva, July 3 to August 17. The Director of Family Allowances, Mr. R. B. Curry, was alternate delegate to the sixth session of the Social Commission held in New York from April 3 to May 5, 1950. Canada was rapporteur for this session. The executive Assistant to the Deputy Minister of Welfare, Mrs. D. B. Sinclair, was an alternate delegate on the Canadian delegation to the Fifth General Assembly in New York from September 19 to December 13, 1950. She was also the Canadian representative to the International Children's Emergency Fund and attended three sessions of the Program Committee and three of the Executive Board, all of which were held in New York. She served as chairman of the Program Committee in 1950, and was elected chairman of the Executive Board for 1951.

The Welfare Branch continued its responsibility for arranging programmes for officials awarded United Nations social welfare fellowships for study in Canada. There was one each from Chile, France, India, Japan and the Netherlands.

Representation was provided to certain interdepartmental committees. These include the Interdepartmental Advisory Committee on Immigration and its Sub-Committee on Migration Policy, the Interdepartmental Committee on Old Age Security, and the Interdepartmental Group on Technical Assistance which deals with Canadian participation in the Colombo Plan and United Nations Technical Assistance in connection with requests for experts and scholarship and fellowship programs.

### FAMILY ALLOWANCES DIVISION

The Family Allowances Act became effective in August 1944 and payments were made in July 1945 to 1,237,754 families on behalf of 2,956,844 children. As at the 31st March 1951, 1,910,192 families were in receipt of allowances on behalf of 4,367,391 children and total disbursements for the year were \$309,753,855 (see Table 23, page 124) bringing the total expended since the program has been in force to \$1,561,773,766.

Of the total number of children registered for the allowances during the fiscal year ended March 31, 1951, 263,083 registrations were by families already in receipt of family allowances on behalf of other children, and 164,536 were by parents applying for the first time. Although the number of applications received in the fiscal year 1950-51 was somewhat less than that received in the year 1949-50, the overall number of families and children in pay continues to increase.

There are several reasons for this increase:

- (a) The birth rate in recent years has been higher than it was in 1933 and 1934. Consequently, the number of applications during the year for new-born children was greater than the number of children going out of pay because they had reached their sixteenth birthday.
- (b) Increased immigration.
- (c) New applications have been submitted by persons in the higher income group who have realized that it is to their advantage to receive Family Allowances.

It will be seen from Tables 24 and 25 (pages 125 and 126) that the increase in families and children was built up gradually through the last twelve months with no notable increase in any one month, and that the average allowance per family and child as at March 31st, 1951, was \$13.72 and \$6.00 (Table 29, page 130) respectively, as compared to \$13.64 and \$6.01 respectively in the previous year. The disbursements for March 1951 were \$26,215,554 (Table 23, page 124), almost \$1,000,000 more than in March 1950.

With the increase in immigration and the continued high post-war birth rate, a further increase in children, families and expenditures can be anticipated in the coming year.

### Office Organization

The situation with regard to accommodation in Regional Offices remained unchanged and, with the exception of New Brunswick, is quite satisfactory. However, the new Federal building in Fredericton is fast nearing completion and the problem of space there will be solved when the move to new quarters takes place early next fall.

The Organization and Methods Branch of the Civil Service Commission completed office surveys in the Toronto and Quebec Regional offices and submitted detailed reports of their findings and recommendations. These reports, aside from containing much valuable information concerning administrative details and procedures, also give an outline of new work methods as well as scientific details on the flow of work. They are being carefully studied and already a number of the recommendations made have been put into effect with good results.

It had been felt for some time that the maintenance of identical indexing systems by both Treasury and Administration was unwarranted; tests were conducted in the Regional offices at Fredericton and Edmonton, the results of which have clearly shown that this is so. The use of a dual

system was first made necessary because of a number of reasons among which was the fact that Treasury and Administration could not be accommodated in quarters permitting easy joint operations. The public has become better acquainted with the type of information that is required in connection with names and addresses and changes affecting these and, consequently, the problems of indexing have been reduced considerably. Treasury officials have therefore agreed to dispense with the maintenance of their index in the Edmonton office and similar action will be taken in the Toronto and Fredericton offices as soon as the installation of an inter-communication system between the "Index" unit and other main units in both Treasury and Administration is completed. The indexing system presently in use by Administration is completed. The indexing system presently in use by Administration will from then on serve Treasury as well and will be staffed by clerks from both divisions. This will result in a saving of personnel, indexing equipment and materials.

Several Regional Directors have reported that the congestion in their respective Central Registries is becoming a problem and makes it difficult to operate efficiently. Terminated files are increasing rapidly and present a storage problem; for these reasons they recommend the destruction, as soon as possible, of dead records at least for the year 1945-46. The matter is presently under study by the National office and it is expected that some solution will be arrived at shortly.

### **Staff**

During the past year efforts have been continued to organize the work of the Regional offices in such a way that the best and most efficient use is made of personnel. This has involved special studies of the work to be done and the staff requirements for this work. Through the co-operation of Regional Directors much progress has been made in seeing that the numbers and classifications of persons employed are best suited to the work of the office concerned. In some instances a reduction in staff was effected and in other cases there was a reclassification of personnel. The Organization Branch of the Civil Service Commission conducted staff surveys in the Regional Offices in Prince Edward Island, Nova Scotia, New Brunswick, Manitoba, Saskatchewan and British Columbia. These surveys have been most helpful and have made possible the securing of permanent appointments for an increased number of employees. In this connection, permanent positions for the entire division now total 406 as compared to 244 a year ago, an increase of 66%. This progress has had a very good effect on the morale and efficiency of employees generally.

It will be seen from Table 22 (page 123) that in the course of the last fiscal year the total number of established positions was reduced from 757 to 740; on the other hand the number of unfilled positions increased from 32 in March 1950 to 46 in March 1951; therefore, the actual number of persons employed as at 31st March 1951 was 694 as compared to 725 a year ago. This substantial reduction was made possible through the continued progress in the standardization and refinement of office procedures and this, in spite of the steady increase in the workload throughout the regional offices. Reductions in staff have been constant throughout the year with the result that the Division is already in line with the recently announced policy of the Government in the matter. Endeavours to reduce staff further will be continued and it is expected that a substantial percentage of the 46 positions that were vacant on the 31st March last will be abolished within the next year.

Some Regional offices have instituted a procedure whereby the staff is rotated periodically from one section of the office to another with individual reallocation of duties. This enables the employees to become familiar with all phases of the work and allows at the same time for general increased efficiency. It is proposed to make this part of the general procedure in all Regional offices.

Although there was no change in staff at the senior level, the last fiscal year saw several changes in the professional class of Social Workers. Supervisors of Welfare Services were appointed for the first time in Newfoundland and Prince Edward Island and resignations made necessary the appointment of new Supervisors in British Columbia and Alberta, and of Social Workers Grade I in Nova Scotia and Ontario. Additional Social Workers were appointed in Quebec and British Columbia, but there still exist vacancies at the Grade I level in Saskatchewan, New Brunswick and Alberta. The serious dearth of qualified Social Workers in the country as a whole is a problem not only for this Division, but for all social agencies; however, with the ever-increasing enrolment in the Schools of Social Work and the better range of salary now being offered by the Government to candidates in this field, the situation should improve in the next year or so.

### **Publicity**

During the year a number of inserts were mailed with the Family Allowances cheques reminding parents of their responsibilities in connection with the continuing eligibility of their children for the allowance and inviting their co-operation in such matters.

A booklet entitled "You and Your Family" was produced over a year ago. It contains three main sections; the first discusses "Family Allowances", giving pertinent facts in an interesting manner; the second deals with spending the family income and the third section contains general information concerning the bringing up of children, such as public health services, diet, and first aid hints. The booklet is sent only on request of the family interested. As at 31st March 1951, some 475,000 booklets had been distributed in all provinces except New Brunswick, Manitoba and Saskatchewan. In these provinces distribution will be completed within the next few months. The demand to date exceeds expectations and represents 25% of the Family Allowances recipients in the provinces covered.

Regional Directors have been making constant use of the film strip "Speaking of Family Allowances" as a means of educating the public on the various phases of the legislation and in particular as to the manner in which the allowances can be used to advantage for the betterment of Canadian children.

### **Conferences**

It had been the custom each year to hold two conferences at Ottawa; one attended by Regional Directors and the other by Supervisors of Welfare Services. These conferences were very valuable and aside from providing an excellent opportunity to discuss mutual problems of administration or to review certain policies and procedures, they made for uniformity in interpretation and practice. However, it was felt that the time had come where these conferences could be held at less frequent intervals and therefore only the Regional Directors' conference was convened in the last fiscal year; the Welfare Supervisors' conference will be

held shortly. A substantial saving in funds will result from the spacing of these conferences at intervals of 18 months instead of holding them annually.

### **Costs of Administration**

The cost of administering the program during the 1950-51 was \$4,316,024, slightly more than in the previous year when it was \$4,255,160. The upward adjustments in salaries, together with the increase in costs of services generally account for the difference. It should be noted, however, that in relation to \$309,753,855 paid out in Family Allowances, the cost of administration is 1.39% as compared to 1.45% the preceding year. As to the breakdown, the cost to the Department of National Health and Welfare is \$1,811,854, to the Department of Finance (Treasury) \$2,322,883, and to the Department of Public Works \$181,287. The cost to the Treasury includes \$895,156 for the postage charges in the mailing of the monthly cheques.

### **Overpayments**

In a program involving annual expenditures of some \$300 million dollars to families numbering close to 2 million, overpayments are inevitable because of the several eligibility requirements involved. Some of the more typical reasons why overpayments are created are:

- (1) Parents cease to maintain their children as required;
- (2) A child may have been improperly absent from school;
- (3) A child may be gainfully employed;
- (4) A parent may fail to report the death of a child;
- (5) A child may have ceased to reside in Canada.

Total overpayments as at 31st March 1951 for the entire period since payments first commenced in July 1945, stood at \$438,401 as compared with \$451,174 a year ago, a net reduction of \$12,772 (see Table 31, page 132). A review of Table 32 (page 132) will show that, as was the case in past years, the main causes of overpayments in order of frequency as to number of cases and in order of volume in terms of money, were: (a) children working for wages; (b) children not in attendance at school, and (c) non-maintenance by parents; in other words, these three categories account for 75% of all cases and 55.6% of the total amount overpaid in the last fiscal year. Two factors that deserve mention here are first, the noticeable decrease during the past year in overpayments resulting from birth date errors; this is accounted for by the fact that birth verification is now on a current basis in all provinces. Secondly, the rather substantial increase in overpayments as the result of deceased children and about which an explanation is given under "Verification of deaths".

In the past year new overpayments discovered amounted to \$449,644 (see Table 33, page 133) as compared with \$611,335 the year before: on the other hand, collections were \$462,417 as against \$589,556. The significant drop in new overpayments is the result of a number of factors, such as the better co-operation on the part of parents in notifying Regional Directors of non-entitlement; more adequate means for determining children who are employed for wages and the decrease in duplicate payments now that birth verification is on a current basis.

Of the total overpayments outstanding as at 31st March 1951, i.e. \$438,401 (see Table 30, page 131), close to 30% or \$129,369 is being recovered currently from active accounts and \$231,805 or 53% is recoverable from parents whose accounts have terminated; the remaining \$77,226 is considered uncollectable. The total amount outstanding is made up of

overpayments set up since the program came into force on the 1st July, 1945, and when considered in relation to the one and one half billion dollars paid out, represents only 0.028%. It is difficult to forecast what the situation will be with regard to overpayment in the future; however, the officers of the Division expect that the balance of overpayments will not increase from its present figure.

### **Verification of Deaths**

In the early years a substantial number of overpayments arose because of long delay or neglect on the part of parents in notifying Regional offices of the death of a child. Through the co-operation of the Dominion Bureau of Statistics, a system was devised whereby the Provincial Registrars of Vital Statistics supply the Regional Directors of Family Allowances in their respective provinces with either weekly, semi-monthly or monthly lists (depending on the local arrangements) of current deaths of children under sixteen. Through this system, which in some provinces has been in effect since as far back as early 1948, it has been possible to eliminate practically all of the overpayments in the category mentioned.

There remained however the problem of verifying all deaths of children under 16 that had occurred in the years prior to that in which the above mentioned system was inaugurated. Therefore, by arrangement, the Dominion Bureau of Statistics supplied the Regional offices with individual death notice cards with the names of all those children under 16 who had died since 1929. This involved close to half a million cards which had to be checked individually against the related Family Allowances file or corresponding Treasury Visa Record and by the 31st March 1951 this task was completed in all but three Regional offices where only approximately 15% of the job remains to be done. So far, total overpayments discovered through this check amount to approximately \$60,000. A substantial portion of these overpayments has already been recovered.

### **Birth Verification**

The balance of unverified births as at 31st March 1951, was 116,569 as compared to 156,821 a year ago (see Table 34, page 135). The large decrease is accounted for by the fact that the Regional offices in Quebec and Newfoundland have now reached the position of other offices in having only current births to verify. It can be said therefore that Birth Verification is no longer a problem. Birth Registration Indexes are supplied by the Dominion Bureau of Statistics some four to six months after the births occur; it follows therefore that there will be at any one time between 100,000 and 125,000 births awaiting verification.

### **School Attendance and Employment**

The Family Allowances legislation provides that allowances are payable if the child is in satisfactory attendance at school in accordance with the laws of the province where he resides. Consequently, in all Regional offices arrangements exist whereby local educational authorities supply reports of unsatisfactory school attendance. When such a report is received, Family Allowances are suspended until the child's attendance again becomes satisfactory.

For those children who are not required to attend school as, for example, children who are over school leaving age, allowances are paid provided the child does not work for salary or wages. If a child over school leaving age is reported to be working for wages, the allowances are suspended for the period of such employment. Arrangements have

been made with the Unemployment Insurance Commission to report children who begin to work. Also, since some children are in types of employment which are not covered by unemployment insurance, reports are sometimes received directly from the employer. Finally, in some provinces a questionnaire is sent once or twice a year to parents of children who are of school leaving age and this serves as a check on the eligibility of the child in respect to school attendance and employment. This system was inaugurated in one Regional office two years ago and in the past year a number of other Regional Directors have made similar arrangements. The results obtained have been such that consideration is now being given to making this a general procedure for all offices.

Table 35 (page 136) shows the number of children for whom allowances were suspended for the years 1949-50 and 1950-51. This table also indicates the number of children for whom allowances were reinstated after a period of suspense. It will be noted that the total number of children for whom allowances were suspended rose from 33,373 in 1949-50 to 36,845 in 1950-51. It should be pointed out that reports of considerable numbers of children thus suspended may reflect the success of the local Regional office in developing procedures to determine such cases fully and promptly.

One factor which influences the number of cases reported to the Regional office for unsatisfactory school attendance or juvenile employment is that the school leaving age differs from province to province. In those provinces where the child leaves school at an earlier age there is, of course, more juvenile employment of children under sixteen and Family Allowances payments are affected thereby.

It is increasingly apparent that the general public is better informed with regard to the provisions of the Family Allowances legislation in respect to these matters. This is due in part to the publicity efforts of this Department, through such means as cheque inserts, films, radio addresses and so forth.

There have been many indications that Family Allowances have played an important part in improving school attendance. Reports issued by a number of provincial school authorities show that there has been a steady improvement in school attendance since the inception of Family Allowances. While there may be other factors which have contributed to the improved attendance, responsible officials have stated that, in their opinion, one of the chief reasons for the improved attendance has been the introduction of Family Allowances. It is significant to note that certain provincial educational authorities report not only an increase in school attendance since Family Allowances began, but also a decrease in the number of prosecutions which have been undertaken by the province for cases of improper absence from school.

The effect of Family Allowances on school attendance has been twofold. First, the withholding of allowances in case of unsatisfactory attendance is an incentive for parents to see that the child returns to school, and, secondly, the receipt of Family Allowances in many cases has enabled parents to provide more suitable food and clothing which in turn has enabled them to keep the child in school. This is borne out by a decrease in some provinces in the number of work permits that the school authorities are called upon to issue. It is also interesting to note that in many cases the payment of allowances has meant that parents are able to keep their children in school after the child has reached the school leaving age and is no longer required by law to attend.

**Prosecutions**

Appropriate action has been taken in the Courts to prosecute those who obtain Family Allowances fraudulently. During the year which ended March 31st, 1951, prosecution was initiated in fifty-six cases. In twenty-seven of these the action was completed (as compared to twenty-two completed prosecutions in 1949-50). Four cases were abandoned for reasons such as mental illness or death of the defendant. The remaining twenty-five cases were not yet concluded on March 31st. Table 36 (page 137) shows the total prosecutions since the inception of Family Allowances and Table 37 (page 137) those prosecutions which occurred in the year 1950-51. In two instances there were two persons prosecuted for offences arising out of the same account.

The largest category of prosecutions arose from duplicate application for Family Allowances. Other cases were the result of such factors as: parent failing to maintain the child; application for a non-existent or deceased child; or the receipt of allowances for a child who is living outside of Canada. The following is a comparison of the incidence of these types of prosecutions (in completed cases) between 1949-50 and 1950-51.

	1949-50	1950-51
1. Duplicate Application .....	7	10
2. Non-maintenance .....	9	8
3. Non-existent or deceased child .....	5	6
4. Non-resident of Canada .....	1	3
Number of completed cases .....	22	27

The completed prosecutions to date have been made under Section 14 of the Family Allowance Act which provides penalties for obtaining Family Allowances fraudulently. Most of the charges have been under Section 14(1) (c) which applies to the cashing of any cheque for an allowance to which the payee is not entitled. In a few of the cases now under consideration action is contemplated under the Criminal Code rather than under Section 14 of the Act.

The number of prosecutions originating in each Regional office is as follows:

	1st Apr. 1947 — March 31, 1951 (No prosecution was undertaken prior to April 1, 1947)	1st Apr. 1950— Mar. 31, 1951
Quebec	62	40
Ontario	16	11
Alberta	5	1
New Brunswick	3	2
Nova Scotia	3	1
British Columbia	3	0
Saskatchewan	1	1
Manitoba	0	0
Prince Edward Island	0	0
Newfoundland	0	0
Yukon & N.W.T.	0	0
	93	56

A number of prosecutions in the province of Quebec have been caused by the delay in birth verification in that province. Now that birth verification is on a current basis it is expected there will be a decrease in those prosecutions arising out of factors such as duplicate accounts and fictitious children.

It is noteworthy that there have been so few prosecutions compared with the number of payees in receipt of Family Allowances. For example, the fifty-six prosecutions under consideration in 1950-51 represent only one case out of every 33,000 accounts in pay.

### **Transfers Between Provinces**

Transfers from one province to another of families in receipt of Family Allowances numbered approximately 32,800 during the fiscal year ended 31st March 1951. A review of Table 38 (page 138) will show that there continues to be a larger number of families moving into the provinces of Ontario, Alberta and British Columbia than those leaving. This is partly due to increased activity in industrial expansion and better opportunities for employment in the provinces mentioned. All other provinces showed a greater number of families leaving than coming in with the most marked losses being in the provinces of Saskatchewan, New Brunswick, Newfoundland and Nova Scotia. This information is helpful to a number of organizations and agencies in assessing population shifts, demands for housing and other social and economic conditions throughout the country.

### **Welfare Services**

All cases in which social problems are involved are referred to the Welfare Section in each Regional office.

*Sources from which cases come.*—During the fiscal year ended March 31, 1951, a total of 20,220 such cases were referred. Of these, 10,729 originated in administrative units during the process of studying eligibility; 4,605 were brought to attention by the families themselves or by their close relatives; 3,638 were referred by social agencies; 1,152 by private individuals, and 96 from other miscellaneous sources.

*Types of problem involved.*—In 6,300 cases the problem grew out of the break-up of the home, mostly involving a claim on the part of each parent for Family Allowances; 3,801 cases were concerned with the eligibility of families living as a family unit but with some social problem complicating the situation from a Family Allowances point of view; 5,347 cases had to do with lack of birth verification; 1,833 with reports that Family Allowances were not being expended for the purposes intended; 487 with non-attendance at school caused by social problems; and 2,714 with other miscellaneous social problems in relation to Family Allowances.

*Misuse of Family Allowances.*—From the outset the Department has held firmly to the view that the mothers of Canada as a group could be trusted to see that their children got the additional advantages that Family Allowances were intended to ensure. This trust appears to have been amply justified. For example, in the twelve-month period ended March 31st last, only 1,333 cases of misuse were reported from all sources and investigation showed that 1,462 were unwarranted reports, leaving only 371 bona fide cases of misuse, or approximately one per 5,000 families. In these cases Family Allowances to the parent were suspended and ar-

rangements made for payment to a suitable relative or friend, if available, otherwise through an agency or a carefully selected local citizen.

Bona fide child-placing agencies may, of course, qualify as "parents" for the children entrusted to their care, in which case they receive and expend Family Allowances for these children, operating within the framework set up by the Department involving banking, accounting and auditing. While it has been necessary in some areas to have investigations made by Family Allowances social workers, the general policy has been to seek the co-operation of local social agencies, both public and private, and they have given extensive and invaluable service. In the fiscal year ended March 31, 1951, 2,413 such investigations were made through the Provincial Departments of Welfare, and 2,004 through other welfare agencies. For each completed investigation conducted by a public or private agency, a fee of \$5.00 was paid at a total cost of slightly over \$22,000. In addition, 2,517 home investigations were made by Family Allowances social work field staff, mainly in areas where local welfare services were not available.

### Indians

Registration of an Indian child for Family Allowances is made on a special form provided for that purpose and is completed by the Indian Superintendent who forwards it to the Regional Director of the province in which the parent lives. At the time of registration and subsequently, the Indian Superintendent provides the Regional Director with information regarding eligibility of the child and recommends the method of payment.

The majority of Indian families receive their Family Allowances by cheque direct to the Indian mother. If the Indian Superintendent considers that a certain degree of supervision is necessary, the cheque is addressed to the Indian payee but is sent in care of the Indian Agency office; this method of payment enables the Superintendent to give some guidance in the spending of the allowance. A small number of accounts are administered through the Indian Agency trust account. Finally, where, because of the mode of living, it is considered advisable, allowances may be paid wholly "in kind". In this method of payment the Indian Superintendent issues vouchers to traders authorizing the supply of certain approved items such as children's clothing and foods which will be of benefit to the children.

The following table shows the number of Indian families registered for Family Allowances as of December 31, 1949 and December 31, 1950:

	December 31, 1949		December 31, 1950	
(a) Cheque direct to the payee	14,390	73.2%	14,934	74.6%
(b) Cheque direct to the payee mailed care of the Indian Agency Office .....	2,526	12.9%	2,296	11.5%
(c) Administered through Indian Agency Trust Account .....	284	1.4%	454	2.3%
(d) Allowances in kind .....	2,459	12.5%	2,330	11.6%
<b>TOTAL</b> .....	<b>19,659</b>	<b>100.0%</b>	<b>20,014</b>	<b>110.0%</b>

There were 57,587 children in the 20,014 families receiving allowances as of December 31, 1950.

It has been the policy of the Indian Affairs Branch, Department of Citizenship and Immigration, to encourage the payment of Family Allow-

ances by direct cheque in all cases where the Indian Superintendent considers the family is able to expend the allowances so received for the benefit of the child. This policy had led to a reduction in the number of families paid in kind from 12.5% as of December 31, 1949, to 11.6% on December 31, 1950. The majority of the accounts now being paid in kind are in the provinces of Ontario and Quebec and in the Yukon and Northwest Territories.

During the year 1950-51 a revised registration form was introduced which made provision for the inclusion of the band and band number of the payee and which emphasized the importance of the Indian parent dealing directly with the Indian Superintendent on all matters concerning Family Allowances. Also, during the year, in collaboration with the Indian Affairs Branch, an "award" letter was prepared which is sent to every Indian applicant for Family Allowances who is to be paid by direct cheque. This letter gives the payee certain information regarding the setting up of the account, the amount of payment, changes in rates, eligibility factors such as maintenance and school attendance, and finally, it advises the Indian payee to inform the Indian Superintendent of any change in status which will affect the account.

It is the opinion of the Indian Affairs Branch that Family Allowances have been a very important factor in the continued improvement noted in school attendance and enrolment records. Reports from the Indian Affairs Field Staff continue to indicate that the payment of Family Allowances is making a substantial contribution to the better health of Indian children generally.

### **Eskimos**

Responsibility for the distribution of Family Allowances to the Eskimos lies with the Department of Resources and Development, which department is concerned with the general administration of Eskimo affairs. As at March 31st, 1951, there were 1,608 families with a total of 3,648 children in pay as compared to 1,589 families and 3,534 children at the end of the previous year. Although the numbers are small, there are difficult problems involved in administering family allowances to the Eskimo people, for they are scattered over thousands of miles of Canada's northern coastline and throughout the Barren Lands.

Cheques are not issued to them; rather they are allowed to buy certain specified items under the supervision of District Registrars, usually Royal Canadian Mounted Police officers. Powdered milk and approved baby cereals are considered as semi-compulsory issues and other nutritious foods are gradually being introduced. Besides food, the purchase of children's clothing accounts for much of the Family Allowances credit. Miscellaneous items, such as rifles, boats and other hunting and fishing equipment is allowed in those cases where a reasonably large credit has accumulated, thus increasing the capacity for self-reliance.

Although the Eskimos represent only a small group, their special problems are being considered carefully, and reports indicate that the Family Allowance credits are beneficial in their effect and are directed for the most part towards the well-being of the children.

### **OLD AGE PENSIONS**

The agreements made by the Government of Canada with the ten provinces and the Yukon Territory prior to April 1, 1950 continued in

force during the fiscal year 1950-51. The Order in Council approving the scheme for the administration and payment of pensions in the Northwest Territories also remained unchanged.

The maximum pension paid in all parts of Canada was \$40 a month. As from April 1, 1950 the maximum pension in Newfoundland was increased from \$30 to \$40 a month. In Newfoundland, as elsewhere in Canada, the maximum amounts of income allowed were the amounts specified in the Old Age Pensions Act.

There were no amendments to either the Old Age Pensions Act or the Old Age Pensions Regulations. At the close of the fiscal year there were 302,173 pensioners as compared with 282,584 at the close of the fiscal year 1949-50. Due to the greater number of pensioners and the increased amount of maximum pension authorized by the amendments to the Act in 1949 Federal Government expenditure was considerably higher than for the previous fiscal year. The expenditure for 1950-51 was \$99,268,005.53 and for 1949-50 it was \$89,652,203.32.

#### ***Parliamentary Committee on Old Age Security***

The Joint Committee of the Senate and the House of Commons on Old Age Security examined Canada's present provisions for the aged and also made a serious study of the plans of a number of other countries. The report of the Committee was presented to Parliament before the end of the 1950 Session and later in the year was discussed with provinces at a Federal-Provincial Conference. Briefly, the Committee recommended that pensions at the rate of \$40 a month financed solely by the Federal Government be paid to all persons over the age of 70 years subject only to a residence requirement. In addition the Committee recommended that pensions of up to \$40 a month subject to a means test, in some respects similar to that which exists under the present plan, be provided for persons 65 to 69 years of age. The recommendation stipulated that pensions of the second type be financed on a 50-50 basis by the Federal Government and the provinces. At the close of the fiscal year 1950-51 final agreement had still to be reached on the amendment to the British North American Act which was required to permit legislation of the type recommended by the Committee.

#### ***Pensions for Blind Persons***

The agreements with the provinces completed prior to April 1, 1950 and the Order in Council approving the scheme for the administration of pensions in the Northwest Territories deal with pensions for blind persons as well as old age pensions. The maximum pension of \$40 a month was paid to blind pensioners in all parts of Canada during the fiscal year 1950-51. The amounts of allowable income specified in the Old Age Pensions Act were provided for in each agreement.

There were no amendments to the Act or Regulations affecting pensions payable to blind persons. The number of pensioners increased from 10,517 as at March 31, 1950, to 11,198 as at March 31, 1951, and Federal Government expenditure from \$3,536,730.97 for the fiscal year 1949-50 to \$3,901,109.01 for the fiscal year 1950-51.

Tables 39 to 42 (pages 139 and 140) show the amounts paid by the Government of Canada to the Provinces and to the Yukon Territory for Old Age Pensions and Pensions for Blind Persons with relevant statistics as at March 31, 1951; also, amounts paid by the Government of Canada to old age and blind pensioners in the Northwest Territories.

### PHYSICAL FITNESS DIVISION

The Physical Fitness Division continued to act as the agency for administering the fitness and recreation services made available under the terms of the National Physical Fitness Act. The National Director, Mr. Ernest Lee, who, in addition was the Chairman of the National Council on Physical Fitness, resigned in December 1950. The position was vacant at the end of March 1951.

During the fiscal year 1950-51, the provinces of Alberta, British Columbia, Manitoba, New Brunswick Nova Scotia, Ontario, Prince Edward Island, Saskatchewan and the Northwest Territories co-operated with the federal government under the terms of the National Physical Fitness Act.

#### **Administration**

The Division continued to provide a variety of professional consultative and informational services for the assistance of provincial government departments and national organizations. It acted as a clearing house for the dissemination of information on recreation, fitness, physical education, community centres, drama, sports, the organization and administration of community and specialized programs, and related matters. The actual organization and direction of recreation and fitness projects continued to be a provincial and local responsibility and consequently the Division did not operate an activity program. Close liaison was maintained with other countries and with the Commonwealth in particular, thus facilitating an exchange of publications and information on the latest developments abroad.

#### **Informational Materials**

Some of the more important publications and reports produced by the Division during the year were:—Equipment for Outdoor Play, Pre-School Play Areas, Simplified Staging, Featuring Fitness (a bibliography of materials currently available), Coaching and Officiating Clinics, Schools and Courses in the Provinces of Canada—1950, Facilities and Programs for the Utilization of Industrial, Commercial, and Agricultural Workers' Spare Time and Annual Holidays, Financial Operation of Community Centres, Proceedings of the Third Conference of Sports Governing Bodies, Sports and Athletics in Other Countries (Vols. 1, 2, and 3 combined), Prelude to performance, Report on the First Canada Wide Survey of Municipal Recreation.

During the year, nine blocks of visual aids totalling 45 titles (27 films, 10 filmstrips and 8 loop films) were circulated within the provinces. On completion of the circuit, visual aids were deposited with the Canadian Film Institute on extended loan for general rental at a minimum service charge. As a result of the preview service, existing film libraries have been extended and new libraries established on a cooperative basis.

During the year, one new film "On Stage" and a stagecraft series of three filmstrips have been produced. "On Stage" is designed to be of assistance to groups in small communities and shows how a community group makes its first attempt to put on a play. The Stagecraft series of three filmstrips—"Simplified Staging", "Stage Settings" and "Simplified Stage Lighting" provides information on how to build, design and equip stage settings for small auditoriums and community halls.

### NATIONAL COUNCIL ON PHYSICAL FITNESS

The Council met in Ottawa, April 3-5, 1950 and in Victoria, September 28-30, 1950. Following the resignation of the Chairman, Mr. J. H. Ross was elected as Acting Chairman of the Council.

In addition to standing committees, the following special committees have been set up by the Council;—Awards; Diploma Courses; Financing International Competition; Financial Policies; Fitness Tests, Training and Promotion; Folk Festivals; History of Physical Education and Recreation in Canada; Job Analysis; National Conference of Recreation Executives; R.C.M.P. Fitness Program; Scholarships; Simplified Rules for Team Games; Sports Governing Bodies.

#### *Third National Conference of Sports Governing Bodies*

The major achievement of the third Conference, convened in January 1951, was the organization of the Canadian Sports Advisory Council by the delegates of the Sports Governing Bodies who unanimously approved a constitution for the new body and elected provisional officers. The constitution was referred to each member body for ratification. On receipt of ratification, the officers-elect assumed office.

The Council's purpose in calling these Conferences was to provide for a meeting to be held in a neutral atmosphere and by so doing, furnish an opportunity for the Sports Governing Bodies to discuss the various problems connected with sports. The establishment of the Canadian Sports Advisory Council brings to fruition a project on which the Council has worked for three years.

#### *Scholarships*

On the recommendation of the National Council on Physical Fitness, scholarships ranging from \$500.00 to \$850.00 and totalling \$4,000.00 were awarded for post graduate studies in the field of Physical Fitness and Recreation.

The recipients were: Mr. W. F. Clayson, University of Toronto; Mr. George Grant, Greater Victoria School Board; Miss E. McFarland, Health and Recreation Branch, Department of Education, Alberta; Miss J. H. Ramsay, University of Western Ontario; Mr. H. Ryan, McGill University; Professor E. J. Tyler, Brandon College.

#### *Recreation Survey*

The National Council on Physical Fitness, in cooperation with the Canadian Federation of Mayors and Municipalities and the Parks and Recreation Association of Canada, conducted a Recreation Survey on a Canada-wide basis. Questionnaires were circulated to all cities of 10,000 and over and a selected group of cities, towns and municipalities under 10,000, and to selected rural areas. The report of the Survey deals with the administration of recreation, finance, program, capital expenditures, and facilities. This survey indicates that Canadians are spending much larger amounts on public recreation programs than had been estimated and that many of the smaller communities are now devoting an increasing proportion of tax funds to this purpose.

#### *Leadership*

The Council gave consideration to the fact that increased demand for trained leaders for small communities and rural areas revealed an acute shortage of suitable personnel. College graduates were not attracted by the salaries offered. The Council recommended that to meet the

needs of smaller communities and rural areas there should be established approved diploma courses requiring one year's study beyond secondary school graduation, which would provide recreation personnel with a type of vocational training comparable to that of a first-class teacher.

#### ***National Physical Fitness Act***

The National Council on Physical Fitness requested the Minister to obtain from the Department of Justice an interpretation of certain sections of the National Physical Fitness Act because of the confusion which existed as to the advisory and executive powers of the Council. The opinions received from the Department of Justice interpreted the Act as giving certain executive powers to the Council. At the end of the fiscal year plans were under way to make the changes in administrative practice which the interpretation required.

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## ADMINISTRATION BRANCH

The Administration Branch of the Department consists of the following Divisions: Departmental Secretary's, Information Services, Legal, Library, Personnel, Purchasing and Supply, and Research. Because these Divisions serve the entire Department both at headquarters and in the field, new or increased activities in the Health and Welfare Branches of the Department have resulted in a greater volume of work for the Divisions of the Administration Branch. The continuing development of the National Health Program, additional responsibilities assumed in connection with the Joint Committee of the Senate and House of Commons on Old Age Security, and a general acceleration of the Department's other activities were reflected during the past year in the work of nearly all Divisions of the Administration Branch.

### DEPARTMENTAL SECRETARY'S DIVISION

A striking increase in volume of work was handled during the past year by the Departmental Secretary's Division. This Division comprises the Accounts and Estimates Section, Central Registry Services, Correspondence Section, Duplicating Section, Stenographic and Typing Pool, and Parliamentary Papers Section.

In addition to the services regularly rendered by these Sections to the entire Department, numerous special projects were carried out. Included among these were the complete secretarial facilities made available by the Division to the Joint Parliamentary Committee on Old Age Security, the assistance given to the Deputy Minister of Welfare in organizing and administering the Public Service Division of the Ottawa Community Chests Campaign, the drafting of security regulations and the handling of all other matters related to security within the Department, and the organization within the Department of the Group Hospital-Medical Insurance Plan for the Federal Public Service.

A special feature of the work of Central Registry Services during the year was the establishment of new sub-registries in the Purchasing and Supply Division and in the Civil Defence Division, making a total of five sub-registries in addition to the Central Registry.

### INFORMATION SERVICES DIVISION

Working in close collaboration and consultation with all Divisions of the Department in the many areas of public health and welfare in which the Department is pledged to support the Provinces, the Information Services Division continued to carry out an extensive program of informational and educational publicity. The prime purpose of the program is to develop and sustain public understanding and support of measures calculated to advance the nation's health and welfare standards.

During the past year the program covered such activities as mental health, child and maternal health, nutrition, dental health, industrial health, blindness control, venereal disease control, and family allowances. The media employed to carry it out included all the instruments of information and education—books, pamphlets, posters, displays, exhibits, films, filmstrips, outlets through the press and radio.

The Information Services Division produced over 4,000,000 pieces of printed health education material during the past year, largely for distribution through provincial departments of health, the Provinces placing them in the hands of medical officers of health and public health visiting

nurses and distributing them to local health units, well-baby clinics, and mental health clinics.

Press facilities were used extensively for news coverage of activities as well as for feature and photo stories.

Radio outlets continued to broadcast daily departmental spot announcements and health plays produced by the Division, such plays being used regularly, on a free "public service" basis, by 102 independent stations. One hundred radio dramas were produced during the year.

Periodicals issued by the Information Services Division included the monthly magazine "Canada's Health and Welfare", which last year contained bimonthly supplements on "Mother and Child", "Meals for Millions", "Blindness Control", "Heart and Arteries", and "Films and Filmstrips". Also produced were monthly issues of "Nutrition Notes", and "Industrial Health Bulletin". Two technical pamphlets were edited for the Industrial Health Division dealing with radiology and radioactive isotopes, as well as two issues of the "Industrial Health Review".

Publications included numbers of new reading and teaching aids, and large quantities of reprints of the Department's books and folders. New publications included the Mental Health Division's 208-page book, "Up the Years from One to Six", and a folder, "Preparing your Child for School", which added to the Mental Health Division's series of Child Training Pamphlets. A booklet was issued for the Dental Health Division on "Ten Little People and Their Teeth", and a teaching manual entitled "Good Habits for Good Teeth" was also produced. Work was begun on a booklet "Teen-Age Tooth Tests" and on a dental health manual for those engaged in teaching oral health.

A folder was issued for the Blindness Control Division on "Eye Trouble", and books on "Simplified Staging" and "Prelude to Performance" were printed for the Physical Fitness Division, while work went ahead on a fitness publication to be entitled "Posture's Important—When You're in Your Teens", the second in a series on the subject.

Completing the Nutrition Division's series of books on quantity food service, publications were produced this year on "Large Scale Food Preparation and Care of Equipment", "Cook and Cookhouse", and "Purchasing and Storing Food for Workmen's Camps". The Information Services Division also arranged production for the same Division of loose-leaf books, "Nutrition Cards for Nurses".

A technical manual for physicians dealt with "Syphilis and Gonorrhea" and, also for the Venereal Disease Control Division, a booklet was prepared entitled "It's a Fact" for lay distribution.

It became necessary to reprint the booklet "Canada's Health and Welfare Program", describing health and welfare services in Canada, and also "What You Want to Know About Nursing", produced for the Canadian Nurses' Association.

Films and filmstrips were found to be increasingly valuable informational media and the Department's collection of such aids was augmented. The film, "Challenge: Science Against Cancer", produced last year by the National Film Board in collaboration with the Division and the United States health authorities, was shown widely and a theatrical version was issued this year for general distribution in both Canada and the United States.

Films entitled "Rural Recreation", "On Stage", and "Prelude to Performance" were arranged for the Physical Fitness Division and a filmstrip was made for that service on "Simplified Staging."

Work was carried forward in the Department's popular Mental Health film program. "Feeling of Depression", another in the "Mental Mechanisms" series, was completed and won the high praise of exhibitors and the public. Arrangements were made for the next in the "Ages and Stages" series, to be entitled "The Frustrating Fours and the Fascinating Fives" and a start was made on production of screen material on "Alcoholism", "Mental Hospitals" and on a "Mental Syndromes" series. A filmstrip dealing with the preparation of the child for school, to be entitled "Once in Wally's Lifetime", was also initiated for the Mental Health Division.

Filmstrips produced included "A Good Breakfast" and "What Breakfast Did for Emily" for the Nutrition Division, "Teen-Age Teeth" and "The Toothsome Tale" for the Dental Health Division, and the "Starlight Story" dealing with the anti-tuberculosis program of the Indian Health Services. Initial work was done on two strips for lay use by the Venereal Disease Control Division.

Exhibits were set up again this year as informational media at a number of large exhibitions, conventions and special gatherings, information officers attending to explain government measures and to distribute literature.

The Division's Biological Photographic Laboratory began during the year to set up a film radiation monitoring unit in connection with the Industrial Health Division's work associated with the handling of radioactive materials. The photographers developed techniques and equipment for such monitoring work, to be carried out in the laboratory.

### LEGAL DIVISION

The work of the Legal Division involved services both of a legal and an administrative character.

Included in the former were matters pertaining to the statutes and regulations falling within Departmental administration, the preparation of contracts and agreements, the giving of opinions, and advising and assisting in prosecutions under the Food and Drugs Act, the Family Allowances Act, and the Opium and Narcotic Drug Act.

Substantial progress was made during the year in revising and consolidating various regulations including those under the Food and Drugs Act, the Quarantine Act, the National Health Program, and certain regulations under the Department of National Health and Welfare Act.

Amongst the administrative services performed by the Division were a number of matters for the Dominion Council of Health, participation in the work of the interdepartmental committee on Medical Benefits for Civil Servants, and in the international aspects of the food and drug law and administration.

### LIBRARY

During the past year the Departmental Library continued with the acquisition and organization of reference and technical books, serial publications, pamphlets and government documents pertaining to all phases of the Department's work.

The removal of the Industrial Health Laboratory to a new building required the creation of a third branch library in Ottawa, the others being located at the Directorate of Food and Drugs Divisions and at the Laboratory of Hygiene.

Some work was started during the year on the recording and organization of library collections in Food and Drug Regional Laboratories.

In December the author entries from the master catalogue in the Main Library were copied by microfilm for inclusion in the Union catalogue of Canadian libraries to be maintained by the Canadian Bibliographic Centre so that their Union catalogue continues to have a complete author record of all the library collections of the Department.

### **PERSONNEL DIVISION**

The Personnel Division continued to carry out its responsibilities with regard to problems of organization, creation of positions and the assignment, re-assignment and promotion of staff. It handled all matters respecting pay, attendance, leave, superannuation, induction, on-the-job training and other training needs as they arose. The Division represented the Department in all personnel matters, carrying on a continuous day-to-day relationship with the Civil Service Commission, Treasury Board staff, Comptroller of the Treasury and other government bodies. It also prepared submissions to the Governor General in Council and to the Treasury Board in connection with staff matters and handled claims for compensation under the Government Employees Compensation Act and the drafting of details of staff estimates.

The past year saw continued difficulty in the recruitment of sufficient staff in the specialist fields such as medical officers, nurses, scientific and technical personnel. There are still opportunities in the Department for employment of qualified persons of this type.

With reference to the government's policy respecting staff reductions, the Personnel Division attempted wherever possible to rearrange duties so that staff might be employed at their fullest capacity. Vacancies were filled by promotion or reassignment and the need for additional positions in expanding divisions was met by transferring positions from divisions in which work had diminished.

### **PURCHASING AND SUPPLY DIVISION**

All divisions of the Department were serviced by the Purchasing and Supply Division in the procurement, provision and maintenance of office or other accommodation and the purchase and provision of furniture, equipment, general materials and supplies, including printing and stationery, for all departmental establishments. A central stationery stockroom was operated at headquarters.

The above activities involved contracting for and purchasing scientific equipment for laboratories, and medical equipment, food, and other supplies for hospitals, clinics and quarantine stations throughout Canada, the Northwest Territories, the Eastern and Western Arctic, the United Kingdom and some points in Continental Europe.

The Indian Health Services hospitals, nursing stations and health centres presented particular problems in supply due to their isolation and the difficulty presented by extraordinary methods of transportation. During the past year the Department of Transport's new ship, the "C. D. Howe", was introduced to the Eastern Arctic Service. The hospital equipment for the ship and numerous stations in the Eastern Arctic constituted a large initial cargo for her maiden voyage.

The efficient co-operation of the Royal Canadian Air Force was enlisted in forwarding medicines required in emergencies by settlements in northern localities.

The supply functions of the Division included the installation and maintenance of offices and establishments occupied by the Department in Canada, in conjunction with the Department of Public Works.

During the past year a Motor Transport Section was established in the Division to control the purchase, maintenance and general operational methods and costs of vehicles operated by the Department.

### RESEARCH DIVISION

During the year, the Research division continued to be responsible for the collection and analysis of health and welfare material. The division acted in a research capacity for the Joint Committee of the Senate and House of Commons on Old Age Security, the Federal-Provincial Conference on Social Security held in Ottawa in December, 1950, the Defence Medical and Dental Services Advisory Board and other boards and committees as well as for officers of the department. It took an active part in the work of the interdepartmental committees on Rehabilitation of Disabled Persons, Old Age Security and Health Insurance, and in planning Canadian Sickness Survey.

Close working relations were continued with provincial health and welfare departments, the schools of public health and social work, the Canadian Welfare Council and the national voluntary agencies in both health and welfare fields. Liaison was maintained, and information exchanged, with leading agencies engaged in social welfare work. The responsibilities of the division were continued for the preparation of reports on different aspects of health and welfare services in Canada for the United Nations and its specialized agencies, notably the World Health and International Labour Organizations.

Valuable aid on various problems was received from the U.S. Social Security Administration and Public Health Service and on different occasions the division provided assistance to a number of U.S. organizations, including the American Medical Association and the Social Work Research Group of the American Conference on Social Work.

For the first three months of the year the division was employed as the research agency for the Joint Committee on Old Age Security. Bulletins on Old Age Security in Australia, New Zealand, Denmark, the United States, Great Britain, France and Switzerland were prepared for the Committee, together with data on existing Canadian old age pension legislation and a large number of memoranda on various aspects of social security in different countries. The division also prepared the chapter of the Committee's report which summarized the evidence presented.

At the request of the National Conference on Personnel in Social Work, preparations began during the year for a national survey to determine the demand for social workers in the welfare programs of public and voluntary agencies and institutions across Canada. The survey, which is intended to aid social agencies and schools of social work in planning training and staff development, covers all full time, paid employees in welfare positions as well as vacancies, new positions to be set up and preferences for trained social work staff. It is designed to show size, composition and area of work of existing welfare staffs and the distribution and use of qualified social workers.

A major part was taken by the division in the preparations for the National Conference on the Rehabilitation of Disabled Persons, held in Toronto on 1st to 3rd February 1950 and with the assistance of a number of other departments and authorities on different aspects of rehabili-

tation, a comprehensive manual, *The Rehabilitation of Disabled Persons*, was prepared for the use of the delegates prior to the conference.

The division assisted in the planning and conduct of the Canadian Sickness Survey and of the supplementary survey of permanent disability in Canada. A commencement was made on the preparation of the National Sickness Survey Report, a large portion of which will be written by the division, and detailed suggested outlines were prepared to aid the provinces in the preparation of the provincial reports.

Assistance continued to be rendered to the provinces in the conduct of the provincial health surveys. Statistical and consultative services were provided in the case of the industrial health survey of Newfoundland, carried out by the Industrial Health division, and microfilm records of physicians located in each province were made available for the assistance of the provincial health survey committees. Analysis of material collected by provincial survey committees was commenced in preparation for the writing of the National Health Survey Report.

Studies on the different aspects of prepaid medical and hospital care were pursued throughout the year. A number of comprehensive bulletins on programs in other countries were prepared, two of which, *Health Insurance in Denmark* and *Health Insurance in New Zealand* were published. The division continued to assist the Directorate of Health Insurance Studies in carrying out specific projects such as the development of national and per capita cost estimates for different services, the analysis of programs of government and voluntary health and hospital plans and the preparation of forecasts of future supply of and demand for health personnel. In addition, a study was commenced of national expenditure on medical and health services and the amount and distribution of expenditure by families of varying size and economic status, based on information obtained from a survey of family expenditure conducted by the Dominion Bureau of Statistics.

During the year, a number of reports for the United Nations were prepared by the division. Separate reports were prepared on the treatment of juvenile delinquents; on the objectives of youth guidance activities in Canada and the organization and administration of the major youth guidance services; and on services in Canada for blind and partially blind children. The division continued to furnish the United Nations with semi-annual bibliographies of social welfare literature, together with periodic reports on traffic in women and children and on legislative changes in the welfare field.

A number of additional comprehensive bulletins were produced during the year, amongst the most important of which were reports on the Hospital Insurance Programs in British Columbia and Saskatchewan, on Municipal Hospital and Doctor Plans in Canada and on Hospital and Medical Care for Public Assistance Recipients. The annual *Survey of Physicians in Canada*, was continued, and a volume of maps showing medical care and relative facilities in the Northwest Territories was prepared. A monthly article on different aspects of social welfare work outside Canada continued to be supplied to *Canada's Health and Welfare* and a number of other articles were prepared by the division for that publication. To supplement the series of bulletins begun the preceding year, a new series, *Research Division memos*, was begun, to provide information to departmental officials on research being carried on in health and welfare subjects.

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TABLE 4

## EXPENDITURES

## DEPARTMENT OF NATIONAL HEALTH &amp; WELFARE

1950-51

HEALTH BRANCH:	\$	\$	\$
<i>General Administration</i>		108,911.84	
<i>General Health Services</i>			
Food and Drugs .....	716,634.96		
Proprietary or Patent Medicines .....	26,330.02		
Opium and Narcotic Drugs .....	165,736.75		
Quarantine and Leprosy .....	262,297.74		
Laboratory of Hygiene .....	388,854.69		
Immigration Medical Inspection .....	686,112.27		
Child and Maternal Health .....	66,420.55		
Public Health Engineering .....	126,091.93		
Treatment of Sick Mariners ....	557,403.76		
Industrial Health .....	158,738.76		
Civil Service Health .....	213,555.22		
Nutrition .....	109,438.39		
Venereal Disease Control .....	34,360.28		
Health Insurance Studies .....	55,274.98		
Dental Health .....	39,068.12		
Hospital Designs .....	18,757.51		
Mental Health .....	73,449.41		
Blindness Control .....	26,504.78		
Epidemiology .....	26,084.98		
Civil Aviation Medicine .....	40,302.00		
Medical Services Indians and Eskimos .....	10,285,667.75		
Total .....		14,077,084.85	
<i>Grants to Provinces</i>			
Health Survey Grant .....	153,850.06		
Hospital Construction Grant ....	6,897,352.81		
General Public Health Grant....	2,907,730.15		
Tuberculosis Control Grant .....	3,166,166.01		
Mental Health Grant .....	2,644,826.65		
Venereal Disease Control Grant ..	484,165.41		
Crippled Children Grant .....	243,502.56		
Professional Training Grant ....	452,853.17		
Public Health Research Grant ..	231,233.56		
Cancer Control Grant .....	1,693,105.80		
Total .....		18,874,786.18	
<i>Grants to Non-Governmental Agencies</i>			
Grants to Institutions			
Assisting Sailors .....	2,600.00		
Canadian National Committee for Mental Hygiene .....	10,000.00		
Health League of Canada .....	10,000.00		
Canadian Public Health Association .....	5,000.00		

(TABLE 4 (ctd.))

	\$	\$	\$
<i>Carried Forward</i>		33,060,782.87	
<i>Grants to Non-Governmental Agencies (Contd.)</i>			
Carried Forward .....	27,600.00		
Canadian National Institute for the Blind .....	45,000.00		
L'Association Canadienne Francaise des Aveugles ....	6,000.00		
L'Institut Nazareth de Montreal	4,050.00		
Montreal Association for the Blind .....	4,050.00		
Canadian Tuberculosis Association .....	20,250.00		
Victorian Order of Nurses .....	13,100.00		
St. John Ambulance Association	10,000.00		
Canadian Red Cross Society ....	10,000.00		
Canadian Paraplegic Association .....	15,000.00		
<b>Total</b> .....		<u>155,050.00</u>	
<b>Total, Health Branch</b> .....			33,215,832.87
<b>WELFARE BRANCH</b>			
<i>Administration</i>			
General .....	30,116.51		
Family Allowances .....	1,811,854.01		
Old Age Pensions and Pensions to the Blind .....	77,937.23		
National Physical Fitness .....	74,868.00 <sup>(a)</sup>		
<b>Total</b> .....		1,994,775.75	
<b>Family Allowances Payments</b> .....		309,465,460.52	
<i>Grants to Provinces</i>			
Old Age Pensions .....	99,268,005.53		
Pensions to the Blind .....	3,901,109.01		
National Physical Fitness .....	150,288.00 <sup>(a)</sup>		
<b>Total</b> .....		103,319,402.54	
<i>Grants to Non-Governmental Agencies</i>			
Canadian Welfare Council .....	12,600.00		
Schools of Social Work .....	52,500.00		
<b>Total</b> .....		<u>65,100.00</u>	
<b>Total, Welfare Branch</b> .....			414,844,738.81
<b>ADMINISTRATION BRANCH</b> .....			792,335.37 <sup>(b)</sup>
<b>TOTAL, DEPARTMENT OF NATIONAL HEALTH &amp; WELFARE</b> .....			<u>448,852,907.05</u>

<sup>(a)</sup> These expenditures were made from the National Physical Fitness Trust Fund to which \$220,687.29 was transferred during the year.

<sup>(b)</sup> Includes gratuities to families of deceased employees.





TABLE 7  
(Civil Service Health Division)  
HEALTH CENTRE STATISTICS  
FISCAL YEAR 1950-51

ITEMS	TOTAL
TOTAL VISITS.....	6,498
Male.....	4,132
Female.....	2,366
First Visits.....	3,368
Repeat Visits.....	3,130
PHYSICAL EXAMINATIONS.....	
Pre-Employment, Permanency, etc.....	1,557
Obligatory Examinations with immunization.....	208
Voluntary.....	723
Other.....	407
OTHER SERVICES.....	
Accident Industrial.....	65
Accident Non-Industrial.....	448
Immunization.....	927
Consultation interview, etc.....	2,163
DISPOSAL.....	
Return to Work.....	6,406
Sent Home.....	92
Referred to Family Physician.....	114
LABORATORY PROCEDURES.....	
Haemoglobin Tests.....	4,453
Red Blood Counts.....	548
White Blood Counts.....	332
Differential Counts.....	295
Urinalyses.....	127
Venepunctures for Serology.....	66
Tests for Sedimentation Rates.....	61
Glucose Tolerance Curves.....	6
Estimations of Fasting Blood Sugars.....	8
Colour Index.....	21
TOTAL.....	5,917
X-RAYS.....	
Hand.....	88
Wrist.....	32
Elbow.....	66
Shoulder.....	95
Foot.....	127
Ankle.....	187
Knee.....	25
Pelvis.....	3
Spine — Cervical.....	
— Dorsal.....	75
— Lumbar.....	
Skull.....	6
Sinuses — Frontal.....	27
Jaw.....	1
Chest.....	1,119
Ribs.....	34
Kidney.....	11
Stomach (6hr Plate G.I. Series).....	10
Gall-bladder.....	1
Chest (Photo-roentgen unit).....	2,197
E.C.G.....	187
TOTAL.....	4,291

TABLE 8  
(Civil Service Health Division)

ACTIVITIES OF CONSULTANT PSYCHOLOGIST  
FISCAL YEAR 1950-51

ITEM	TOTAL
<b>CONSULTATIONS (PERSONAL INTERVIEWS)</b>	
No. Referred by Nursing Counsellors.....	192
No. referred by Psychiatrist (H.C.).....	42
No. referred by Clinicians (H.C.).....	9
No. referred Directly by Departmental Personnel Officers.....	12
No. referred by Departmental Personnel Officers through N/Cs.....	8
No. referred from Civil Service Commission.....	4
No. referred from D.V.A. Rehabilitation Officer.....	6
No. voluntarily requested by individual.....	13
No. repeat interviews — former cases.....	54
<b>TOTAL.....</b>	<b>340</b>
<b>STAFF CONSULTATIONS</b>	
Consultations with Personnel and Administrative Officers, Supervisors and Induction Interviews with Nursing Counsellors.....	59

TABLE 9  
(Civil Service Health Division)

RETIREMENTS FROM SERVICE — ACCORDING TO DISABILITY  
FISCAL YEAR 1950-51

Male — 176

Female — 32

Total — 210

CAUSE OF DISABILITY	AGE GROUPS					Total
	Under 40	40-44	45-49	50-54	55-59	
Infective and Parasitic.....	5	3	2	3	3	16
Neoplasms.....	1			4	9	14
Allergic, endocrine, metabolic, nutritional.....		1		2	5	8
Mental Psychoneurotic personality.....	2	4	4	10	12	32
Nervous systems and sense organs.....	2		2	6	10	20
Circulatory.....		2	5	20	28	55
Respiratory.....			2	8	6	16
Digestive.....				3	4	7
Genito-urinary.....	1		1		4	6
Skin and cellular.....					2	2
Bones and organs of movement.....	2	3	2	8	12	27
Accidents and results of old injuries.....		1		1	5	7
<b>TOTAL.....</b>	<b>13</b>	<b>14</b>	<b>18</b>	<b>65</b>	<b>100</b>	<b>210</b>

TABLE 10  
(Food and Drug Divisions)

DRUGS EXAMINED

From: April 1st, 1950 to March 31st, 1951

Laboratory at	Domestic	Imports	Miscellaneous	Total	Passed by Inspectors at Customs	Grand Total	Adulterated	Misbranded	Other Infractions
Halifax . . .	587	1,181	.....	1,768	2,769	4,537	173	972	.....
Montreal . .	1,159	806	.....	1,965	12,335	14,300	61	688	.....
Ottawa . . .	706	79	.....	785	165	950	99	.....	.....
Toronto . . .	255	1,334	.....	1,589	8,162	9,751	14	730	48
Winnipeg . .	271	1,029	.....	1,300	6,289	7,589	29	846	2
Vancouver .	783	1,056	.....	1,839	3,982	5,821	117	635	291
TOTALS . . .	3,761	5,485	.....	9,246	33,702	42,948	493	3,871	341

TABLE 11  
(Food and Drug Divisions)

## EXAMINATION OF DOMESTIC FOODS

From: April 1st, 1950 to March 31st, 1951

	LABORATORIES						Adult- erated	Mis- branded	Other Infractions	Totals
	Hali- fax	Mont- real	Ott- awa	Toron- to	Winni- peg	Van- couver				
Alimentary Pastes.....	13	10		4	11	1	11	11		39
Baking Powder—Leavening Agents or Chemicals.....	50	3	3	7	22	5	19	20		90
Bakery Products—Cakes Pastry, etc.....	57	41	51	42	39	12	15	152		242
Beverage and Beverage Concentrates.....	251	591	12	148	201	203	48	308		1,406
Bread, Flour and Cereals.....	43	46	5	16	26	39	17	39		175
Breakfast Foods.....	20	1	2	3	5		13	1		31
Confectionery.....	55	6	21	38	53	17	4	116		190
Dairy Products.....	79	595	78	356	218	127	902	46		1,453
Dessert Powders and Mixes ..	57	6	80	14	22	4	10	18		183
Eggs and Egg Products.....	3	1						2		4
Fish and Fish Products.....	124	16	9	4	28	191	9	15		372
Food Colours and Flavours ..	63	6	28	16	28	39	29	84		180
Food Oriental.....										
Fruit—Fresh.....	6		2	5				3		13
Fruit—Canned.....	94	88	20	10	79	19	19	10		310
Fruit—Dried.....	26	2	6	1	4		3	3		39
Fruit—Glazed or Candied.....					9	8	2	6		17
Gelatin.....	2		35			1	1	2		38
Honey or Honey Products.....	22		9		7	53	11	5		91
Jams and Jellies.....	4	4	7	1	8	3		6		27
Juices and Syrups.....	120	11	33	1	126	47	4	50		338
Lard and Shortening.....		1	24			22		1		47
Liquors Distilled and Fermented.....	71		73			9	6	1	5	153
Meat and Meat Products .....	250	730	108	265	539	493	623	52		2,385
Nuts.....	7		1	14	23	6	4	62		51
Oils.....	17	2		5	3	33	2	96		60
Pickles.....	8			1	64	1	12	11		74
Preservatives.....					1	20	1	2		21
Salad Dressings—Sandwich Spreads and Other Condiments.....	11	2	3	16	30	10	3	45		72
Soup and Soup Mixes.....	7	1	52	9	21	1	5	12		91
Spices.....	18	17	18	10	72	48	21	27		183
Sugar and Substitutes.....	3	4	2		3	1	4	2		13
Sweeteners—Artificial.....						1				1
Syrups and Molasses.....	12	1	6	8	10	30	24	8		67
Vegetables—Canned.....	100	26	30	21	273	20	14	53		470
Vegetables—Dried.....	8	6	5	1	1	1	8	2		22
Vegetables—Fresh.....	1		3	4	1	2		5		11
Vinegar.....	5	1	1	2	2	45	7	16		56
Water.....	39	8	4		5			6		58
Miscellaneous.....	48		15	12	28	3	8	29		106
GRAND TOTALS.....	1,694	2,226	746	1,034	1,962	1,515	1,859*	1,327*	5*	9,177

\* These totals are not included in the righthand column.

TABLE 12  
(Food and Drug Divisions)

EXAMINATION OF IMPORTED FOODS  
FROM: APRIL 1ST, 1950 TO MARCH 31ST, 1951

	LABORATORIES						Adult- erated	Mis- branded	Other Infrac- tions	Total
	Hali- fax	Mont- real	Ott- awa	Toron- to	Winni- peg	Van- couver				
Alimentary Pastes.....	4				1	1		2		6
Baking Powder-Leavening Agents or Chemicals.....	9			2		4		5		15
Bakery Products—Cakes, Pastry, etc.....	14	9		30	12	24		35		89
Beverage and Beverage Concentrates.....	36	31		36	15	15	7	76		133
Bread, Flour and Cereals.....	29	25		2	2	15	2	20		73
Breakfast Foods.....	1	6		1		2		7		10
Confectionery.....	109	52	4	21	92	287	39	86		565
Dairy Products.....	61	105		24	5	50	15	318		245
Dessert Powders and Mixes.....	10			2		11		14		23
Eggs and Egg Products.....										
Fish and Fish Products.....	13	2	2	26	569	145	76	85		757
Food Colours and Flavours.....	58	2		4	11	31	4	31		106
Food Oriental.....	57				233		1	210		290
Fruit—Fresh.....		60	2	2	215	2	2	5		281
Fruit—Canned.....	5			3		71	1	3		79
Fruit—Dried.....	149	471	4	86	1,057	579	113	73		2,346
Fruit—Glazed or Candied.....					4	6		5		10
Gelatin.....			20			1	1			21
Honey or Honey Products.....	5			1	1	3		6		10
James and Jellies.....	1	2		4		14	2	6		21
Juices and Syrups.....	74	11	1	1	6	40	4	28		133
Lard and Shortening.....						2		1		2
Liquors Distilled and Fermented.....	3				1	1		2		5
Meat and Meat Products.....	18	1		6	1	125	42	13		151
Nuts.....	279	680	9	283	776	433	258	119	3	2,460
Oils.....	8	63		6	2	3	5	17		82
Pickles.....	4					7	4	4		11
Preservatives.....				4	2			5		6
Salad Dressings—Sandwich Spreads and other condiments.....	12	5		13	3	11	3	12		44
Soup and Soup Mixes.....	6	2		1		1		8		10
Spices.....	32	228	8	21	75	67	11	37		431
Sugar and Substitutes.....	2	1						2		3
Sweetners—Artificial.....										
Syrups and Molasses.....	383	794		1	2	3	4	9		1,183
Vegetables—Canned.....	34	1		1		12		5		48
Vegetables—Dried.....	10	2		2	11	7		10		32
Vegetables—Fresh.....	1			4			4			5
Vinegar.....	1	18		5		3	3	10		27
Water.....	2	1								3
Miscellaneous.....	41		1	10	41	3	2	46		96
GRAND TOTALS.....	1,471	2,572	51	602	3,137	1,979	*603	*1,315	*3	9,812

\* These totals are not included in the righthand total column.

TABLE 13  
(Food and Drug Divisions)

RADIO COMMERCIALS—LABELS—ADVERTISEMENTS REVIEWED  
FISCAL YEAR 1950-51

	RADIO COMMERCIALS	LABELS—ADVERTISEMENTS	TOTALS
Food and Drug Act. . . . .	17,293	4,459	21,752
Proprietary or Patent Med. Act. . . . .	10,225	1,930	12,155
GRAND TOTALS. . . . .	27,518	6,389	33,907

TABLE 14  
(Narcotic Control Division)  
CONVICTIONS UNDER THE OPIUM AND NARCOTIC DRUG ACT  
FOR THE JUDICIAL YEAR ENDED SEPTEMBER 30TH 1950

PROVINCE	NATURE OF OFFENCE					DRUGS INVOLVED								
	Pos- session of Drugs	Selling Offering Giving Away and Delivery	Cultiva- ting Opium Poppies	Obtaining Drugs from more than one Physician	Profes- sional Cases Under Sec. 6 of the Act	Totals	Opium	Mor- phine	He- roin	Mari- huana	Co- caine	Meth- adone	Dem- erol	Totals
Newfoundland.....														
Prince Edward Island.....														
Nova Scotia.....	3					3		2		1				3
New Brunswick.....		1				1				1				1
Quebec.....	26	5			2	33		4	29					33
Ontario.....	82	2			1	85		11	73		1			85
Manitoba.....	17					17	1		16					17
Saskatchewan.....	2					2		1	1					2
Alberta.....	40	4		1		45	4	2	36		1	1	1	45
British Columbia...	171	1	1			173	7	2	164					173
Yukon Territory.....	1					1			1					1
TOTALS.....	342	13	1	1	3	360	12	22	320	2	2	1	1	360

TABLE 15  
(Narcotic Control Division)  
IMPORTS OF MAIN NARCOTICS  
FOR PERIOD 1941 — 1950 INCLUSIVE

Unit of Weight — Ounce, Pure Drug

Year	Raw Opium	Medicinal Opium & Preparations	Morphine	Heroin	Cocaine	Ethyl- Morphine	Dilaudide	Papa- verine	Codeine	Demerol	Amidone
1941.....	5,600	15,032	3,354	880	1,681	764	9	139	16,120		
1942.....		2,088	2,865	682	1,831	147	14	122	15,291		
1943.....	1,344	9,390	4,360	964	2,338	844	14	46	9,777		
1944.....	1,056	416	5,229	468	1,233	2,131	10	354	26,149	1,211	
1945.....	4,000	3,842	4,791	762	361	1,195	19	571	23,122	2,085	
1946.....	4,000	4,614	1,181	1,020	1,797	664	23	805	35,885	5,539	
1947.....	3,360	6,458	1,046	906	2,169	745	18	961	36,915	9,018	
1948.....	3,200	3,040	3,013	1,019	993	919	26	2,809	34,058	5,175	892
1949.....	1,720	3,202	3,188	906	666	1,433	11	943	37,751	4,106	1,068
1950.....	1,609	4,000	2,337	748	1,344	1,207	21	1,292	93,269	5,480	92

TABLE 16  
(Narcotic Control Division)  
ESTIMATED CONSUMPTION OF THE MAIN NARCOTICS  
FOR THE PERIOD 1921-1950 INCLUSIVE

Unit of Weight — Ounce, Pure Drug

Year	Raw Opium	Medicinal Opium & Prepara- tions	Morphine	Heroin	Cocaine	Ethyl- morphine	Dilaudide	Papaverine	Codeine	Demerol
1941.....	2,363	10,123	3,527	1,023	1,376	528	14	56	19,964	.....
1942.....	3,562	8,219	3,704	917	1,517	615	14	138	21,983	.....
1943.....	3,704	5,645	4,445	811	1,623	739	12	171	21,630	.....
1944.....	3,810	7,090	3,633	740	1,480	1,458	14	280	22,241	1,042
1945.....	3,175	6,314	3,351	670	1,305	691	12	381	22,809	1,102
1946.....	3,422	4,797	3,492	1,058	1,552	1,110	22	455	36,191	2,045
1947.....	3,932	4,734	3,090	881	1,390	1,107	15	715	36,484	5,894
1948.....	2,090	6,026	3,074	995	1,407	1,032	22	1,416	39,672	5,642
1949.....	2,010	3,606	2,718	898	1,197	949	16	1,359	44,443	6,852
1950.....	2,330	5,375	2,613	1,000	1,408	1,103	16	1,632	45,582	7,270

[TABLE 17  
(Immigration Medical Service)]

## SUMMARY OF ACTIVITIES

FISCAL YEAR 1950-51

**CANADA:**

Immigrants medically inspected on arrival at ocean and air ports.....	77,348
Non-immigrants medically inspected on arrival at ocean and air ports.....	17,579
Certified as "prohibited" under Immigration Act, Sec. 3, (a) and (b).....	25
Certified as physically defective, Sec. 3 (c).....	169
Refused permanent admission for medical reasons, at ocean and air ports.....	7
Total number rejected at all ports.....	340

**OVERSEAS — (United Kingdom, Continent and Orient):**

Prospective emigrants medically examined.....	136,755
Certified as "prohibited" under Immigration Act, Sec. 3, (a), (b) and (k).....	1,391
Certified as physically defective, Sec. 3 (c).....	9,076
Refused admission.....	1,701
Re-examinations.....	17,560

**United Kingdom:**

Prospective emigrants medically examined.....	42,445
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**Continent of Europe:**

Prospective emigrants medically examined.....	92,076
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**Orient:**

Prospective emigrants medically examined.....	2,234
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**EXAMINATION OVERSEAS:**

	Examinations	Re-exami- nations
By Canadian Medical Officers in British Isles.....	34,372	1,703
By Roster Doctors in British Isles.....	8,073	835
By Canadian Medical Officers on the Continent (a).....	47,998	8,579
By Roster Doctors on the Continent.....	13,271	461
By Canadian Medical Officers in Germany.....	25,526	4,949
By Canadian Medical Officers in Austria.....	5,281	1,027
By Roster Doctors in the Orient.....	2,234	6
<b>TOTAL, (Fiscal year 1950-51).....</b>	<b>136,755</b>	<b>17,560</b>
<b>TOTAL, (Fiscal year 1949-50).....</b>	<b>81,998</b>	<b>17,331</b>

(a) Except Austria and Germany

**EXAMINATIONS OVERSEAS:**

By Canadian Medical Officers in London.....	18,042
"    "    "    in Glasgow.....	7,790
"    "    "    in Liverpool.....	7,896
"    "    "    in Belfast.....	644
"    "    "    in Paris.....	6,931
"    "    "    in Brussels.....	5,426
"    "    "    in The Hague.....	15,523
"    "    "    in Rome.....	19,914
"    "    "    in Stockholm.....	204
"    "    "    in Austria.....	5,281
"    "    "    in Germany.....	25,526
By Roster Doctors, in British Isles.....	8,073
"    "    on the Continent.....	13,271
"    "    in Pakistan.....	9
"    "    in India.....	75
"    "    in China.....	2,150

**TOTAL..... 136,755**

(Table 17 Ctd.)  
 DETAILS OF EXAMINATIONS  
 FISCAL YEAR 1950-51

	Immigrants	Non-Immigrants
Gander, Newfoundland.....	1,854	2,476
St. John's, Newfoundland.....	610	317
Harmon Field, Newfoundland.....	30	48
Halifax, N.S.....	36,449	1,278
Dartmouth, N.S.....		69
North Sydney, N.S.....	3	92
Sydney, N.S.....	193	400
Saint John, N.B.....	4,938	434
Moncton, N.B.....	79	70
Quebec, P.Q.....	20,420	6,749
Port Alfred, P.Q.....	62	63
Dorval, P.Q.....	2,459	3,134
Montreal, P.Q.....	654	417
Malton, Ont.....	220	611
Vancouver, B.C.....	461	1,239
Victoria, B.C.....	42	142
Other Ports.....	37	40
Ports (not stated).....	122	.....
U.S.A. Ports.....	8,715	.....
TOTALS.....	77,348	17,579

Rejections — 340

CERTIFICATIONS AND DISPOSITIONS OF CASES AT CANADIAN PORTS  
 FISCAL YEAR 1950-51

SUBSECTION	Admitted	Deported	Pending	Totals
Section 3, s.s. (a), Mental diseases and defects.....	2*	3	4	9
Section 3, s.s. (b), Loathsome diseases, including tuberculosis.....	2*	1	13	16
Section 3, s.s. (c), Physical diseases and defects.....	79	3	87	169
TOTALS.....	83	7	104	194

\*Temporary entry.

TABLE 18  
(Immigration Medical Service)

CERTIFICATIONS AND DISPOSITIONS OF CASES OVERSEAS

Migrants medically examined prior to embarkation and certified under  
Section 3 of the Immigration Act

FISCAL YEAR 1950-51

	BRITISH ISLES		CONTINENT OF EUROPE				TOTAL
	Examined by Can. M.O's.	Examined by Roster Drs.	Examined by Can. M.O's.	Examined by Roster Drs.	Examined CMO Germany	Examined CMO Austria	
Certified under:							
SS (a) Mental Diseases and Defects	44	19	105	12	35	6	221
SS (b) Loathsome and Contagious Diseases.....	446	84	479	173	847	77	2,106
SS (c) Physical Defects.....	3,417	900	3,784	1,075	4,667	1,072	14,915
SS (k) Constitutional Psychopathic Inferiority.....	23	1	5	0	2	3	34
TOTAL.....	3,930	1,004	4,373	1,260	5,551	1,158	17,276

TABLE 19  
(Quarantine Service)  
SHIPS BOARDED BY QUARANTINE OFFICERS, 1950-51

The following table indicates the number of ships boarded during the fiscal year 1950-51, also total personnel on board, divided into their respective groups

Station	Vessels Inspected	PERSONNEL INSPECTED							Port Totals
		PASSENGERS					Crews	Cattlemen, Stowaways, Distressed Seamen, Etc.	
		First Class	Cabin and Second Class	Tourist Third	Third Class and Steerage				
Halifax, N.S. ....	506	6,623	4,460	49,488	22,926	49,317	21	132,835	
Saint John, N.B. ....	275	1,219	371	3,864	2,331	15,417	27	23,229	
Quebec, P.Q. ....	1,243	15,199	2,703	31,616	5,460	71,760	73	126,811	
William Head, B.C. ....	481	1,322	1,127	.....	534	20,974	22	23,979	
TOTALS. ....	2,505	24,363	8,661	84,968	31,251	157,468	143	306,854	

TABLE 20  
(Quarantine Service)  
VESSELS INSPECTED FOR DERATIZATION, 1950-51

Port	Vessels inspected, fumigated and deratization certificates issued	Vessels inspected and exemption certificates issued	Vessels inspected and time extended or certificates endorsed	Total vessels inspected for vermin	Rodents Recovered	
					Rats	Mice
Halifax, N.S.	6	65	3	74	2	.....
Sydney, N.S.	.....	9	.....	9	.....	.....
Saint John, N.B.	.....	21	.....	24	.....	.....
Port Alfred, P.Q.	2	30	1	30	.....	.....
Quebec, P.Q.	.....	4	.....	7	.....	.....
Trois-Rivieres, P.Q.	3	7	.....	8	38	.....
Sorel, P.Q.	1	2	.....	4	.....	.....
Montreal, P.Q.	13	114	68	195	37	116
Vancouver, B.C.	59	90	149	298	174	10
Victoria, including Esquimalt, B.C.	1	15	32	48	.....	.....
Port Alberni, B.C.	1	4	15	20	12	.....
TOTALS	88	361	268	717	263	126

TABLE 21  
(Sick Mariners Service)  
TOTAL NUMBER OF VESSELS — DUES COLLECTED AND EXPENDITURES  
CALENDAR YEAR 1950

VESSELS	Number Vessels Paying Dues	Total Dues Collected	Total Number of Crew	Total Expenditure	Average Expenditure for each Member of Crew
Foreign.....	2,000	\$223,144.43	75,102	\$240,193.02	\$ 3.20
Vessels Trading Continually between Canadian Ports.....	4,484	12,912.02	18,086	202,617.17	11.20
TOTAL.....	6,484	236,056.45	93,188	442,810.19	4.75

TABLE 22  
(Family Allowances Division)

## NUMBER OF EMPLOYEES as at 31 MARCH, 1950

PROVINCE	Authorized Establishment	Permanent	Temporary	Total filled	Vacancies	Casuals	Remarks
Newfoundland.....	30	6	24	29	1	6	
Prince Edward Island.....	9	2	7	7	2		
Nova Scotia.....	46	13	33	45	1		
New Brunswick.....	45	14	31	42	3		
Quebec.....	217	50	167	210	7	19	19 casuals released 31 March/50
Ontario.....	199	79	120	187	12		
Manitoba.....	49	24	25	48	1		
Saskatchewan.....	51	14	37	48	3		
Alberta.....	49	14	35	49			
British Columbia.....	47	18	29	46	1		
Ottawa & Yukon & N.W.T.	15	10	5	14	1		
TOTAL.....	757	244	513	725	32	25	

## NUMBER OF EMPLOYEES as at 31 MARCH, 1951

PROVINCE	Authorized Establishment	Permanent	Temporary	Total filled	Vacancies	Casuals	Remarks
Newfoundland.....	30	12	18	30		6	6 casuals released 31 March/51
Prince Edward Island.....	8	6	2	8			
Nova Scotia.....	47	23	24	44	3		
New Brunswick.....	43	30	13	40	3		
Quebec.....	218	115	103	203	15		
Ontario.....	188	106	82	178	10		
Manitoba.....	46	25	21	44	2		
Saskatchewan.....	48	26	22	43	5		
Alberta.....	51	27	24	45	6		
British Columbia.....	47	26	21	45	2		
Ottawa & Yukon & N.W.T.	14	10	4	14			
TOTAL.....	740	406	334	694	46	6	

TABLE 23  
(Family Allowances Division)  
FAMILY ALLOWANCES PAYMENTS  
FISCAL YEAR 1950-51

PROVINCE	April	May	June	July	August	September
Newfoundland . . . . .	833,866	840,769	843,000	840,257	842,588	848,789
Prince Edward Island . . . . .	203,630	204,372	204,045	205,125	206,013	206,356
Nova Scotia . . . . .	1,293,028	1,296,429	1,297,078	1,301,249	1,303,798	1,307,223
New Brunswick . . . . .	1,134,336	1,137,061	1,138,320	1,141,448	1,144,637	1,144,054
Quebec . . . . .	8,166,550	8,184,606	8,224,887	8,250,498	8,280,762	8,302,915
Ontario . . . . .	7,275,486	7,297,592	7,320,868	7,351,737	7,391,701	7,416,751
Manitoba . . . . .	1,334,381	1,338,132	1,342,460	1,353,010	1,357,773	1,354,466
Saskatchewan . . . . .	1,587,076	1,594,306	1,594,306	1,606,516	1,611,264	1,613,532
Alberta . . . . .	1,691,449	1,698,823	1,708,163	1,720,628	1,740,548	1,715,529
British Columbia . . . . .	1,793,373	1,798,704	1,804,758	1,819,517	1,830,162	1,834,714
Yukon and N.W.T. . . . .	50,719	51,567	54,507	51,988	55,275	54,391
NATIONAL . . . . .	25,363,894	25,440,130	25,532,992	25,641,973	25,764,521	25,798,720

	October	November	December	January	February	March	TOTAL
Newfoundland . . . . .	856,535	860,161	862,901	863,508	865,101	871,448	\$10,228,923
Prince Edward Island . . . . .	206,381	205,756	206,661	205,943	206,740	207,170	2,468,192
Nova Scotia . . . . .	1,304,735	1,309,549	1,311,854	1,313,228	1,314,609	1,319,063	15,671,843
New Brunswick . . . . .	1,145,126	1,143,402	1,146,983	1,147,032	1,147,480	1,146,587	13,717,066
Quebec . . . . .	8,309,343	8,332,913	8,354,630	8,391,584	8,411,509	8,437,090	99,647,287
Ontario . . . . .	7,435,209	7,468,315	7,497,184	7,529,551	7,555,553	7,577,615	89,117,562
Manitoba . . . . .	1,352,600	1,357,549	1,358,049	1,363,250	1,368,529	1,370,575	16,250,774
Saskatchewan . . . . .	1,605,769	1,608,381	1,606,222	1,605,681	1,605,632	1,608,013	19,244,467
Alberta . . . . .	1,755,763	1,747,743	1,743,505	1,751,803	1,756,364	1,754,746	20,785,064
British Columbia . . . . .	1,828,721	1,839,252	1,848,344	1,856,568	1,863,757	1,867,142	21,985,012
Yukon and N.W.T. . . . .	53,123	51,735	52,910	51,880	53,465	56,105	637,665
NATIONAL . . . . .	25,853,305	25,924,756	25,989,243	26,080,028	26,148,739	26,215,554	309,753,855

TABLE 24 (Family Allowances Division)  
FAMILIES IN PAY—FISCAL YEAR 1950-51

PROVINCE	April	May	June	July	August	September
Newfoundland.....	50,699	50,808	50,905	50,910	50,923	51,048
Prince Edward Island.....	13,201	13,234	13,256	13,312	13,348	13,346
Nova Scotia.....	91,023	91,168	91,246	91,364	91,491	91,595
New Brunswick.....	72,612	72,668	72,703	72,821	72,922	72,890
Quebec.....	509,255	510,457	512,251	514,274	516,474	517,747
Ontario.....	605,776	607,515	609,279	611,396	613,757	615,242
Manitoba.....	105,981	106,284	106,564	106,846	107,113	107,086
Saskatchewan.....	117,141	117,438	117,811	118,222	118,446	118,689
Alberta.....	131,121	131,769	132,480	133,222	133,656	132,893
British Columbia.....	156,664	156,887	157,193	157,717	158,273	158,567
Yukon and N.W.T.....	3,866	3,890	3,910	3,929	3,977	3,978
NATIONAL.....	1,857,339	1,862,118	1,867,598	1,874,013	1,880,380	1,883,081

PROVINCE	October	November	December	January	February	March
Newfoundland.....	51,173	51,180	51,292	51,349	51,466	51,663
Prince Edward Island.....	13,343	13,339	13,358	13,311	13,317	13,317
Nova Scotia.....	91,499	91,667	91,847	91,879	91,981	92,095
New Brunswick.....	72,860	72,822	72,866	72,793	72,722	72,692
Quebec.....	519,192	520,380	521,403	523,152	524,503	525,358
Ontario.....	616,955	619,082	621,301	623,550	625,499	627,511
Manitoba.....	107,175	107,351	107,644	107,757	108,159	108,288
Saskatchewan.....	118,544	118,554	118,333	118,265	118,141	118,276
Alberta.....	134,365	134,834	135,235	135,351	135,781	135,864
British Columbia.....	158,520	159,116	159,765	160,178	160,669	161,088
Yukon and N.W.T.....	3,974	3,968	3,970	3,987	4,008	4,040
NATIONAL.....	1,887,600	1,892,293	1,897,014	1,901,572	1,906,246	1,910,192

No. of families as at 31st March, 1951.....	1,910,192
No. of families as at 31st March, 1950.....	1,852,269
Increase.....	57,923

TABLE 25  
(Family Allowances Division)  
CHILDREN IN PAY -- FISCAL YEAR 1950-51

PROVINCE	April	May	June	July	August	September
Newfoundland.....	139,768	140,345	141,000	140,923	141,438	142,086
Prince Edward Island.....	33,714	33,854	33,915	33,826	34,231	34,274
Nova Scotia.....	214,357	214,806	215,090	215,621	215,917	216,413
New Brunswick.....	189,162	189,617	189,925	190,384	190,939	190,901
Quebec.....	1,356,225	1,362,700	1,366,827	1,371,899	1,375,852	1,381,217
Ontario.....	1,209,825	1,214,358	1,218,872	1,225,423	1,230,727	1,235,000
Manitoba.....	221,812	222,597	223,550	224,740	225,580	225,041
Saskatchewan.....	262,158	262,869	262,695	264,670	264,999	265,367
Alberta.....	281,927	282,065	283,468	285,764	287,685	284,567
British Columbia.....	300,764	301,571	302,580	304,929	306,341	307,148
Yukon and N.W.T.....	8,308	8,337	8,441	8,521	8,761	8,713
NATIONAL.....	4,218,020	4,233,119	4,246,163	4,266,700	4,282,471	4,290,707

PROVINCE	October	November	December	January	February	March
Newfoundland.....	142,800	143,195	143,856	144,128	144,569	145,230
Prince Edward Island.....	34,257	34,229	34,195	34,094	34,235	34,308
Nova Scotia.....	216,222	216,836	217,380	217,768	218,183	218,496
New Brunswick.....	191,073	191,013	191,366	191,486	191,591	191,608
Quebec.....	1,383,111	1,386,723	1,390,737	1,395,784	1,400,668	1,405,161
Ontario.....	1,238,900	1,244,023	1,249,184	1,255,024	1,260,917	1,265,313
Manitoba.....	225,237	225,778	226,217	226,685	227,707	228,245
Saskatchewan.....	264,380	264,648	264,410	264,548	264,372	264,582
Alberta.....	287,969	289,098	289,742	290,623	291,822	292,104
British Columbia.....	305,253	307,521	309,527	311,000	312,447	313,525
Yukon and N.W.T.....	8,476	8,662	8,645	8,681	8,758	8,819
NATIONAL.....	4,297,678	4,311,726	4,325,259	4,339,821	4,355,269	4,367,391

No. of children as at 31st March, 1951..... 4,367,391  
No. of children as at 31st March, 1950..... 4,202,263

Increase..... 165,128



TABLE 27  
(Family Allowances Division)  
COMPARATIVE STATEMENT OF FAMILY ALLOWANCES PAYMENTS  
BETWEEN MONTH OF MARCH, 1950 AND MONTH OF MARCH, 1951

PROVINCE	MONTH OF MARCH, 1950					MONTH OF MARCH, 1951				
	Families in Pay		Children in Pay		Amount Paid	Families in Pay		Children in Pay		Amount Paid
	Number	Average Allow. per Family	Number	Average Allow. per Child		Number	Average Allow. per Family	Number	Average Allow. per Child	
Newfoundland.....	50,694	\$16.48	139,571	\$5.99	\$ 835,534	51,663	\$16.87	145,230	\$6.00	\$ 871,448
Prince Edward Island.	13,165	15.41	33,588	6.04	202,853	13,317	15.56	34,308	6.04	207,170
Nova Scotia.....	91,012	14.18	213,981	6.03	1,291,026	92,095	14.32	218,496	6.04	1,319,063
New Brunswick.....	72,410	15.61	188,593	5.99	1,130,338	72,692	15.77	191,608	5.98	1,146,587
Quebec.....	507,727	16.00	1,350,588	6.01	8,124,539	525,358	16.06	1,405,161	6.00	8,437,090
Ontario.....	603,847	12.01	1,204,558	6.02	7,252,071	627,511	12.07	1,265,313	5.99	7,577,615
Manitoba.....	105,611	12.58	220,862	6.02	1,328,884	108,288	12.66	228,245	6.00	1,370,575
Saskatchewan.....	116,917	13.56	261,623	6.06	1,585,299	118,276	13.59	264,582	6.08	1,608,013
Alberta.....	130,686	12.89	280,780	6.00	1,685,215	135,864	12.91	292,104	6.01	1,754,746
British Columbia.....	156,367	11.44	299,838	5.96	1,788,233	161,088	11.59	313,525	5.95	1,867,142
Yukon and N.W.T....	3,833	13.51	8,281	6.25	51,804	4,040	13.89	8,819	6.36	56,105
NATIONAL.....	1,852,269	13.64	4,202,263	6.01	25,275,796	1,910,192	13.72	4,367,391	6.00	26,215,554

TABLE 28  
(Family Allowances Division)  
INCREASE SHOWN IN COMPARING FAMILY ALLOWANCES PAYMENTS  
MARCH 1950 AND MARCH 1951

PROVINCE	Increase in Number of Families in Pay		Increase in Number of Children in Pay		Increase in Amount Paid	
	Number	Percent	Number	Percent	Amount	Percent
Newfoundland.....	969	1.91	5,659	4.05	\$ 35,914	4.30
Prince Edward Island.....	152	1.15	720	2.14	4,317	2.13
Nova Scotia.....	1,083	1.19	4,515	2.11	28,037	2.17
New Brunswick.....	282	0.39	3,015	1.60	16,249	1.44
Quebec.....	17,631	3.47	54,573	4.04	312,551	3.85
Ontario.....	23,664	3.92	60,755	5.04	325,544	4.49
Manitoba.....	2,677	2.53	7,383	3.34	41,691	3.14
Saskatchewan.....	1,359	1.16	2,959	1.13	22,714	1.43
Alberta.....	5,178	3.96	11,324	4.03	69,531	4.12
British Columbia.....	4,721	3.02	13,687	4.56	78,909	4.41
Yukon and N.W.T.....	207	5.40	538	6.50	4,301	8.30
NATIONAL.....	57,923	3.13	165,128	3.93	\$939,758	3.72

TABLE 29  
(Family Allowances Division)

AVERAGE ALLOWANCE PER FAMILY AND PER CHILD  
MARCH 1951

PROVINCE	Average per Family	Average per Child
Newfoundland . . . . .	\$16.87	\$6.00
Prince Edward Island . . . . .	15.56	6.04
Nova Scotia . . . . .	14.32	6.04
New Brunswick . . . . .	15.77	5.98
Quebec . . . . .	16.06	6.00
Ontario . . . . .	12.07	5.99
Manitoba . . . . .	12.66	6.00
Saskatchewan . . . . .	13.59	6.08
Alberta . . . . .	12.91	6.01
British Columbia . . . . .	11.59	5.95
Yukon & N.W.T. . . . .	13.89	6.36
NATIONAL . . . . .	13.72	6.00

TABLE 30  
(Family Allowances Division)  
OVERPAYMENTS OF FAMILY ALLOWANCES REMAINING UNPAID  
MARCH, 1951

(The overpayments may have occurred at any time between July 1, 1945 and March 31, 1950)

PROVINCE	Overpayments Recoverable by Deductions		Overpayments Recoverable by Collections		Overpayments Considered Uncollectible		Total Overpayments Outstanding	
	Number of Accounts	Amount	Number of Accounts	Amount	Number of Accounts	Amount	Number of Accounts	Amount
Newfoundland.....	37	\$1,430.00	28	\$ 577.00	4	\$ 74.00	69	\$ 2,081.00
Prince Edward Island.....	24	620.00	3	35.00	2	47.00	29	702.00
Nova Scotia.....	73	4,116.00	132	3,262.00	33	1,172.00	238	8,550.00
New Brunswick.....	113	3,443.00	190	5,650.65	90	4,788.50	393	13,882.15
Quebec.....	1,082	84,906.64	2,488	180,710.94	509	43,006.37	4,079	308,623.95
Ontario.....	294	20,371.61	772	25,412.14	369	15,746.90	1,435	61,530.65
Manitoba.....	58	1,521.00	91	2,304.50	36	2,021.00	185	5,846.50
Saskatchewan.....	69	3,424.00	88	3,286.30	38	2,099.000	195	8,809.30
Alberta.....	119	4,410.00	122	3,451.01	68	4,417.90	309	12,278.91
British Columbia.....	147	4,631.00	128	5,227.50	76	3,163.75	351	13,022.25
Northwest Territories & Yukon.....	18	496.00	37	1,888.00	12	690.52	67	3,074.52
NATIONAL.....	2,034	\$129,369.25	4,079	\$231,805.04	1,237	\$77,226.94	7,350	\$438,401.23

TABLE 31  
(Family Allowances Division)

## OVERPAYMENTS OF FAMILY ALLOWANCES REMAINING UNPAID

MARCH 31, 1951, COMPARED TO MARCH 31, 1950

(These overpayments may have occurred at any time between July 1, 1945 and March 31, 1951)

PROVINCE	March 1950 Total Overpayments Outstanding		March 1951 Total Overpayments Outstanding		Increase or Decrease in total Overpayments since 31st March, 1950
	Number of accounts	Amount	Number of accounts	Amount	
		\$		\$	\$
Newfoundland . . . . .	54	860.00	69	2,081.00	+ 1,221.00
Prince Edward Island . . . . .	33	858.00	29	702.00	- 156.00
Nova Scotia . . . . .	261	7,911.72	238	8,550.00	+ 638.28
New Brunswick . . . . .	313	13,413.15	393	13,882.15	+ 469.00
Quebec . . . . .	4,480	333,421.98	4,079	308,623.95	- 24,798.03
Ontario . . . . .	1,243	51,976.13	1,435	61,530.65	+ 9,554.52
Manitoba . . . . .	206	6,910.50	185	5,846.50	- 1,064.00
Saskatchewan . . . . .	159	6,855.50	195	8,809.30	+ 1,953.80
Alberta . . . . .	355	12,557.90	309	12,278.91	- 278.99
British Columbia . . . . .	342	11,941.75	351	13,022.25	+ 1,080.50
Yukon & N.W.T. . . . .	104	4,468.15	67	3,074.52	- 1,393.63
NATIONAL . . . . .	7,550	451,174.78	7,350	438,401.23	- 12,772.95

TABLE 32  
(Family Allowances Division)

## OVERPAYMENTS ESTABLISHED FOR FIRST TIME IN 1950-51

NOTE: Most of these overpayments were recovered in the year in which they were incurred

CATEGORY	No. of Accounts	P.C.	Amount		P.C.	Average overpayment per account
	No.	%	\$	*	%	\$
Working for Wages . . . . .	4,325	36.2	93,655	(1)	20.83	21.65
Non-School Attendance . . . . .	2,817	23.6	77,957	(3)	17.34	27.67
Non-Maintenance . . . . .	1,708	14.3	78,375	(2)	17.43	45.89
Child Deceased . . . . .	1,183	9.9	62,841	(4)	13.98	53.12
Birth Date Errors . . . . .	756	6.3	51,273	(5)	11.40	67.82
Internal Errors . . . . .	433	3.6	28,976	(6)	6.44	66.91
Non-Resident . . . . .	333	2.7	12,454	(9)	2.77	37.39
Duplicate Accounts . . . . .	161	1.3	28,488	(7)	6.34	17.69
Immigration Requirements . . . . .	10	0.8	1,506	(10)	0.33	150.60
Miscellaneous . . . . .	216	1.8	14,119	(8)	3.14	65.36
TOTAL . . . . .	11,942	100.0	\$449,644	*	100.00	\$37.65

\* In order of priority as to amounts involved.

TABLE 33  
(Family Allowances Division)  
BREAKDOWN OF OVERPAYMENTS  
DISCOVERED IN FISCAL YEAR ENDED MARCH 31, 1951

PROVINCE	Birth Date Errors		Non School Attendance		Non Maintenance		Child Deceased		Non Residence		Duplicate Accounts	
	(Accts)	(Amount) \$	(Accts)	(Amount) \$	(Accts)	(Amount) \$	(Accts)	(Amount) \$	(Accts)	(Amount) \$	(Accts)	(Amount) \$
Newfoundland.....	75	1,552	251	4,821	47	2,225	65	927	10	219	3	83
Prince Edward Island.....	1	5	106	1,457	14	353	9	93	4	40		
Nova Scotia.....	65	3,007	365	6,793	73	1,448	40	2,051	21	532		
New Brunswick.....	508	41,306	455	10,214	52	1,297	13	341	19	777	3	83
Quebec.....	27	1,291	525	25,933	523	40,213	530	37,658	84	2,759	103	20,554
Ontario.....	19	820	336	8,832	220	9,730	213	14,627	78	2,678	25	4,235
Manitoba.....	27	1,378	137	3,330	114	3,329	49	998	24	500		
Saskatchewan.....	8	364	68	1,548	144	7,220	55	958	16	629	5	426
Alberta.....	14	791	280	7,021	155	2,719	30	300	21	1,188	5	526
British Columbia.....	12	759	292	7,986	205	6,488	99	835	56	3,182	5	158
Yukon & N.W.T.....			2	19	161	3,353	80	4,053			12	2,423
TOTALS.....	(756)	51,273	(2,817)	77,957	(1,708)	78,375	(1,183)	62,841	(333)	12,454	(161)	28,488
(Percentage)	11.40%		17.34%		17.43%		13.98%		2.77%		6.34%	

**BREAKDOWN OF OVERPAYMENTS (Cont'd)**  
**DISCOVERED IN FISCAL YEAR ENDED MARCH 31, 1951**

PROVINCE	Immigration Requirements		Internal Errors		Working for wages		Other Causes		Total	
	(Accts)	(Amount) \$	(Accts)	(Amount) \$	(Accts)	(Amount) \$	(Accts)	(Amount) \$	(Accts)	(Amount) \$
Newfoundland.....			25	969	65	1,577	6	125	547	12,498
Prince Edward Island.....			2	15	9	128	1	256	145	2,342
Nova Scotia.....			86	6,140	96	1,839	11	362	693	19,203
New Brunswick.....			30	1,564	37	789	7	241	681	18,263
Quebec.....	2	484	122	7,835	1,839	48,898	58	9,443	4,294	235,083
Ontario.....	4	946	76	9,280	1,505	27,331	19	1,488	2,503	80,438
Manitoba.....	4	76	1	16	188	3,226	58	1,000	594	13,295
Saskatchewan.....			9	229	85	1,630	12	370	422	14,388
Alberta.....			45	1,531	141	2,699	12	95	697	16,443
British Columbia.....			34	1,300	359	5,508	27	612	1,091	26,830
Yukon & N.W.T.....			3	97			5	127	275	10,831
TOTALS.....	(10)	1,506	(433)	28,976	(4,325)	93,655	(216)	14,119	(11,942)	449,644
(Percentage).....	0.33%		6.44%		20.83%		3.14%		100.00%	

TABLE 34  
(Family Allowances Division)  
BIRTH VERIFICATION

PROVINCE	Balance still to be verified March 31, 1949	Balance still to be verified March 31, 1950	Balance still to be verified March 31, 1951
Newfoundland.....		30,528	9,826
Prince Edward Island.....	351	230	597
Nova Scotia.....	1,953	1,432	5,039
New Brunswick.....	3,365	4,479	3,850
Quebec.....	95,731	88,905	51,621
Ontario.....	23,709	17,883	28,659
Manitoba.....	3,911	2,642	4,089
Saskatchewan.....	3,220	2,491	2,941
Alberta.....	5,289	3,276	4,790
British Columbia.....	6,570	4,642	4,890
Yukon & N.W.T.....	563	313	267
TOTAL.....	144,662	156,821	116,569

TABLE 35  
(Family Allowances Division)  
SCHOOL ATTENDANCE AND WORKING FOR WAGES  
COMPARATIVE STATEMENT — 1949-50 AND 1950-51

PROVINCE	NUMBER OF CHILDREN WHOSE ALLOWANCES WERE SUSPENDED				NUMBER OF CHILDREN WHOSE ALLOWANCES WERE REINSTATED							
	Working for Wages		Unlawful Absence from School		TOTAL		Having Ceased to Work		Having Resumed School Attendance		TOTAL	
	1949-50	1950-51	1949-50	1950-51	1949-50	1950-51	1949-50	1950-51	1949-50	1950-51		
	1949-50	1950-51	1949-50	1950-51	1949-50	1950-51	1949-50	1950-51	1949-50	1950-51	1949-50	1950-51
Newfoundland.....	149	242	1,299	3,094	1,448	3,336	79	1,194	3,059	1,267	3,138	
Prince Edward Island.....	27	39	816	652	843	691	3	10	816	652	819	
Nova Scotia.....	332	395	1,400	1,305	1,732	1,700	169	906	866	1,075	1,015	
New Brunswick.....	242	418	1,207	2,324	1,449	2,742	14	36	653	637	667	
Quebec.....	10,177	9,655	1,133	1,309	11,310	10,964	581	698	1,332	1,631	1,913	
Ontario.....	8,832	9,344	2,096	2,088	10,928	11,432	354	545	2,139	1,590	2,329	
Manitoba.....	1,019	867	661	656	1,680	1,523	92	35	218	365	400	
Saskatchewan.....	88	165	327	267	415	432	22	16	326	267	283	
Alberta.....	1,183	1,053	1,083	1,160	2,266	2,213	349	167	832	809	976	
British Columbia.....	847	1,154	450	650	1,297	1,804	86	95	253	329	424	
Yukon & N.W.T.....	2	5	3	3	5	8	.....	.....	1	.....	.....	
TOTAL.....	22,898	23,337	10,475	13,508	33,373	36,845	1,743	1,830	8,670	10,205	10,413	12,035

TABLE 36 (Family Allowances Division)  
REPORT OF PROSECUTIONS, MAY 1947 — MARCH 31, 1951

PROVINCE	Completed	Abandoned	Under Way	Total	Non Maintenance	Duplicate Accounts	Dual Recipients	Fictitious Children	Non Residence	Deceased Child	Child Working for Wages
Newfoundland.....	0	0	0	0							
Prince Edward Island.....	0	0	0	0							
Nova Scotia.....	3	0	0	3	2			1			
New Brunswick.....	2	0	1	3	2		1				
Quebec.....	39	5	18	62	11	26	4	15	4	2	
Ontario.....	9	2	5	16	8	1	1	1	3	2	
Manitoba.....	0	0	0	0							
Saskatchewan.....	0	0	1	1	1			1			
Alberta.....	5	0	0	5	4						
British Columbia.....	2	1	0	3				1			1
Yukon and N.W.T.....	0	0	0	0	2						
TOTALS.....	60	8	25	93	30	27	6	18	7	4	1

TABLE 37 (Family Allowances Division)  
REPORT OF PROSECUTIONS, APRIL 1, 1950 — MARCH 31, 1951

PROVINCE	Completed	Abandoned	Under Way	Total	Non Maintenance	Duplicate Accounts	Dual Recipients	Fictitious Children	Non Residence	Deceased Child	Child Working for Wages
Newfoundland.....	0	0	0	0							
Prince Edward Island.....	0	0	0	0							
Nova Scotia.....	1	0	0	1	1						
New Brunswick.....	1	0	1	2	1		1				
Quebec.....	20	2	18	40	5	15	4	11	3	2	
Ontario.....	4	2	5	11	5	1	1		3	1	
Manitoba.....	0	0	0	0							
Saskatchewan.....	0	0	1	1	1						
Alberta.....	1	0	0	1							
British Columbia.....	0	0	0	0							1
Yukon and N.W.T.....	0	0	0	0							
TOTALS.....	27	4	25	56	13	16	6	11	6	3	1

TABLE 38  
(Family Allowances Division)  
TRANSFER OF FAMILY ALLOWANCES ACCOUNTS BETWEEN PROVINCES  
FISCAL YEAR 1950-51

	Nfld.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Yukon & N.W.T.	Total
<b>TRANSFERS IN:</b>												
April.....	15	17	73	107	221	411	163	305	291	225	31	1,859
May.....	26	44	143	87	216	664	227	332	373	216	19	2,347
June.....	35	39	137	101	366	637	223	366	415	361	24	2,704
July.....	39	41	162	118	324	746	224	265	426	366	23	2,734
August.....	36	43	156	103	324	683	230	226	351	367	38	2,560
September.....	51	32	161	103	293	939	241	277	482	406	34	3,019
October.....	35	41	195	153	385	1,123	250	266	448	433	33	3,362
November.....	37	31	193	113	473	1,128	308	261	538	594	28	3,704
December.....	34	17	142	112	291	1,030	261	168	377	436	28	2,896
January.....	30	29	135	96	354	865	287	208	350	540	34	2,928
February.....	25	21	134	109	336	747	222	117	314	363	22	2,410
March.....	37	28	152	73	282	593	174	148	216	244	18	1,965
TOTAL.....	400	383	1,783	1,278	3,865	9,566	2,810	2,939	4,581	4,551	332	32,488*
<b>TRANSFERS OUT:</b>												
April.....	28	23	142	102	216	436	177	198	258	433	25	2,038
May.....	31	34	180	152	306	595	248	250	192	439	20	2,457
June.....	35	23	159	184	272	618	256	250	349	427	30	2,603
July.....	83	30	201	176	390	506	323	310	287	417	22	2,745
August.....	50	33	218	178	327	518	273	296	338	494	27	2,752
September.....	99	45	200	189	405	624	436	304	337	468	33	3,140
October.....	78	63	311	304	417	610	338	420	328	445	32	3,346
November.....	93	51	282	278	395	722	399	505	469	371	31	3,596
December.....	72	41	203	195	432	432	184	582	318	288	24	2,744
January.....	74	52	211	231	340	574	318	504	436	197	34	2,971
February.....	55	35	157	170	377	450	198	267	311	260	13	2,293
March.....	24	36	125	175	313	447	197	220	250	220	17	2,024
TOTAL.....	722	466	2,389	2,334	4,163	6,532	3,347	4,160	3,829	4,459	308	32,709*

\* NOTE: Difference of 221 accounts in transit between provinces.

TABLE 39  
(Old Age Pensions Division)

NUMBER OF PENSIONERS AND PERCENTAGE OF POPULATION,  
BY PROVINCES

FISCAL YEAR 1950-51

PROVINCE	Number of Pensioners	* Percentage of Pensioners to Total Population	* Percentage of Pensioners to Population over 70 years of age
Alberta.....	17,990	2.01	47.47
British Columbia.....	31,983	2.81	44.67
Manitoba.....	17,573	2.21	45.06
New Brunswick.....	16,681	3.20	71.59
Newfoundland.....	11,394	3.21	82.57
Nova Scotia.....	20,808	3.16	59.28
Ontario.....	91,509	2.03	36.59
Prince Edward Island.....	3,136	3.27	50.58
Quebec.....	73,564	1.85	53.15
Saskatchewan.....	17,409	1.99	44.07
Northwest Territories.....	26	.22	14.21
Yukon Territory.....	100	2.04	30.49
CANADA.....	302,173	2.18	46.10

\* Percentages based on the estimated population as at June 1, 1950 (Dominion Bureau of Statistics) except Yukon Territory and Northwest Territories which are based on 1941 Census.

TABLE 40  
(Old Age Pensions Division)

TOTAL PAYMENTS AND AVERAGE MONTHLY PAYMENTS BY PROVINCES

FISCAL YEAR 1950-51

PROVINCE	Average Monthly Pension	Dominion's Payments for Fiscal Year 1950-51	Dominion's Payments since Inception of Act
Alberta.....	\$37.63	\$ 5,876,261.07	\$ 44,913,277.68
British Columbia.....	36.95	10,252,116.30	67,521,555.74
Manitoba.....	38.34	5,984,845.37	52,855,269.33
New Brunswick.....	36.48	5,427,021.19	37,267,613.93
Newfoundland.....	38.01	3,819,074.12	6,048,520.53
Nova Scotia.....	35.65	6,572,266.69	48,601,590.73
Ontario.....	37.79	30,065,393.84	253,295,649.08
Prince Edward Island.....	34.38	945,051.64	5,800,523.45
Quebec.....	37.71	24,478,750.17	166,144,905.73
Saskatchewan.....	37.51	5,798,980.18	51,426,444.18
Northwest Territories.....	39.55	11,221.13	70,202.38
Yukon Territory.....	38.53	37,023.83	61,508.21
TOTAL.....		\$99,268,005.53	\$734,007,060.97

TABLE 41  
(Old Age Pensions Division)

NUMBER OF BLIND PENSIONERS AND PERCENTAGE OF POPULATION  
BY PROVINCES

FISCAL YEAR 1950-51

PROVINCE	Number of Pensioners	* Percentage of Pensioners to Total Population
Alberta.....	494	.055
British Columbia.....	661	.058
Manitoba.....	573	.072
New Brunswick.....	1,067	.204
Newfoundland.....	317	.089
Nova Scotia.....	1,048	.159
Ontario.....	2,408	.053
Prince Edward Island.....	127	.132
Quebec.....	4,016	.101
Saskatchewan.....	484	.055
Northwest Territories.....	1	.008
Yukon Territory.....	2	.041
CANADA.....	11,198	.081

TABLE 42  
(Old Age Pensions Division)

TOTAL PAYMENTS TO BLIND AND AVERAGE MONTHLY PAYMENTS,  
BY PROVINCES

FISCAL YEAR 1950-51

PROVINCE	Average Monthly Pension	Dominion's Payments for Fiscal Year 1950-51	Dominion's Payments since Inception of Act
Alberta.....	\$38.49	\$ 167,280.18	\$ 884,132.32
British Columbia.....	38.13	225,083.27	1,230,721.76
Manitoba.....	39.32	203,835.65	1,198,438.64
New Brunswick.....	39.00	377,556.11	2,425,548.01
Newfoundland.....	39.46	102,736.71	138,399.01
Nova Scotia.....	38.35	348,338.20	2,104,227.57
Ontario.....	38.66	830,484.95	5,197,653.97
Prince Edward Island.....	38.22	43,342.92	300,639.13
Quebec.....	39.07	1,430,107.11	8,335,916.54
Saskatchewan.....	38.96	171,023.91	1,107,156.46
Northwest Territories.....	40.00	600.00	2,180.00
Yukon Territory.....	40.00	720.00	960.00
TOTAL.....		\$3,901,109.01	\$22,925,973.41

\* Percentages based on the estimated population as at June 1, 1950 (Dominion Bureau of Statistics) except Yukon Territory and Northwest Territories which are based on 1941 census.

TABLE 43  
(Physical Fitness Division)SUMMARY OF AMOUNTS AVAILABLE FOR AND PAID TO PROVINCES  
UNDER THE NATIONAL PHYSICAL FITNESS ACT

	Amount of Matching Grant Available Annually (b)	Amount Paid in Fiscal Year to the nearest dollar (a)							Total Payments 1944-51
		1944-45	1945-46	1946-47	1947-48	1948-49	1949-50	1950-51	
Prince Edward Island.....	1,858.50			2,635		4,185	1,859	1,858.50	10,538.50
Nova Scotia.....	11,301.75	7,418	6,748	12,486	8,685	14,002	11,427	10,415.36	71,181.36
New Brunswick.....	8,943.75				2,187	6,281	8,944	6,771.84	24,183.84
Quebec (d).....	65,151.00								
Ontario.....	74,063.25								
Manitoba.....	14,209.50		2,692	7,485	7,934	5,998	7,238	74,063.25 (1)	74,063.25 (2)
Saskatchewan.....	17,520.75		17,546	17,546	35,092	17,521	17,521	8,250.97 (1)	39,597.97
Alberta.....	15,567.75		23,071	15,516	19,488	14,674	16,464	17,520.75 (2)	122,245.75
British Columbia.....	15,993.00	16,016		32,032	16,016	15,993	15,993	15,567.75	104,778.75
Northwest Territories.....	234.00				234	234	231	15,993.00	112,043.00
Yukon (d).....	96.75							234.00	936.00
Newfoundland (d).....	6,175.05								
TOTALS.....	231,175.05 (c)	23,434	49,555	87,700	89,635	78,885	79,680	150,675.42	559,768.82

(a) The amount paid to the province in any one fiscal year does not necessarily coincide with the amount available to it in that year, as payments in respect of previous years may be included.

(b) Amounts were originally calculated on a per capita basis of distribution to nine provinces. In 1947 they were recalculated to include the Northwest Territories and Yukon. The figures given are the recalculated amounts.

(c) On entry of Newfoundland into Confederation in 1949, the annual federal grant was increased in order to make provision for the new province.

(d) These provinces do not participate at the present time.

(1) Payment for 1949-50 claim.

(2) Claim for 1950-51 not yet received.

TABLE 44  
(Physical Fitness Division)

SUMMARY OF ALLOTMENTS AND EXPENDITURES  
PHYSICAL FITNESS DIVISION

FOR THE FISCAL YEAR 1950-51

ADMINISTRATION

Balance from fiscal year 1949-50.....	\$ 37,292.02
Parliamentary Appropriations 1950-51.....	74,868.00
	<hr/>
	\$112,160.02

EXPENDITURES —

Total Salaries.....	\$26,731.61
Express, Freight & Cartage.....	919.85
Telephones, Telegrams & Postage.....	688.27
Printing, Stationery & Office Equipment.....	4,790.17
Travelling Expenses.....	9,377.03
Educational & Informational Publicity.....	23,062.13
Professional & Special Services.....	3,800.35
Sundries.....	642.46

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\$ 70,011.87

Balance at end of fiscal year 1950-51.....	<hr/> \$ 42,148.15
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ASSISTANCE TO PROVINCES

Balance from fiscal year 1949-50.....	\$175,588.52
Parliamentary Appropriations 1950-51.....	150,288.00
	<hr/>
	\$325,876.52

EXPENDITURES —

Prince Edward Island.....	\$ 1,858.50
Nova Scotia.....	10,415.36
New Brunswick.....	6,771.84
Ontario.....	74,063.25*
Manitoba.....	8,250.97*
Saskatchewan.....	17,520.75
Alberta.....	15,567.75
British Columbia.....	15,993.00
Northwest Territories.....	234.00

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\$150,675.42

Balance at end of fiscal year 1950-51.....	<hr/> \$175,201.10
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\*This constitutes a late payment for the year 1949-50.

The claim for the fiscal year 1950-51 has not yet been received from this province.

TABLE 45  
(Physical Fitness Division)  
ASSISTANCE TO PROVINCES AND PROVINCIAL EXPENDITURES UNDER  
NATIONAL PHYSICAL FITNESS ACT, 1950-51

PROVINCE	Provincial Department Responsible for Administration	Date of Expiration of Current Agreement	EXPENDITURE					
			TOTAL			PER CAPITA		
			Provincial	Federal	Total	Provincial	Federal	Total
Prince Edward Island..	Dept. of Education, Charlottetown.	31 March, '52	11,166.50	1,858.50	13,025.00	.1174	.0195	.1369
Nova Scotia.....	Dept. of Public Health, Halifax.	31 March, '52	12,636.61	10,415.36	23,051.97	.0218	.0182	.0400
New Brunswick.....	Dept. of Education, Fredericton.	31 March, '52	9,488.21	6,771.84	16,260.05	.0207	.0148	.0355
Ontario.....	Dept. of Education, Toronto.	31 March, '52	464,468.79(1)	74,063.25(2)	538,532.04(1)	.1199	.0195	.1394
Manitoba.....	Dept. of Health & Public Welfare, Winnipeg.	31 March, '52	12,237.29(1)	8,250.97(2)	20,488.26(1)	.0167	.0113	.0280
Saskatchewan.....	Dept. of Education, Regina..	31 Dec., '53	29,293.29	17,520.75	47,814.14	.0327	.0195	.0522
Alberta.....	Dept. of Education, Calgary..	31 March, '52	34,682.63	15,567.75	50,250.38	.0435	.0195	.0630
British Columbia.....	Dept. of Education, Vancouver.	31 March, '52	94,805.28(1)	15,933.00	110,738.28(1)	.1159	.0195	.1354
Northwest Territories..	Dept. of Resources & Development, Ottawa.....	31 March, '52	13,316.00	234.00	13,550.00	1.1070	.0195	1.1264

(1) Complete returns for 1950-51 not yet available.

(2) Late payment for 1949-50 — payment for 1950-51 not included.

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CANADA

DEPARTMENT OF NATIONAL HEALTH AND WELFARE

# ANNUAL REPORT

*for the fiscal year*

*ending March 31*

**1952**

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CANADA

THE DEPARTMENT OF  
NATIONAL HEALTH AND WELFARE  
**ANNUAL REPORT**

FOR THE FISCAL YEAR  
ENDED MARCH 31

**1952**

Edmond Cloutier, C.M.G., O.A., D.S.P.,  
Printer to the Queen's Most Excellent Majesty  
Ottawa, 1952



*To His Excellency the Right Honourable Vincent Massey, C.H., Governor-General and Commander-in-Chief of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

The undersigned has the honour to present to Your Excellency the Annual Report of the Department of National Health and Welfare for the fiscal year ended March 31, 1952.

Respectfully Submitted,

PAUL MARTIN,  
*Minister of National Health and Welfare.*

OTTAWA, April 1, 1952.



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*To the Honourable Paul Martin, Q.C., M.P., LL.D., Minister of National Health and Welfare, Ottawa.*

SIR:

The year under review was one of generally increased activity for the department. Three developments are worthy of special note: the widening area of achievement under the National Health Program; the completion of the transfer of the federal responsibility for civil defence to this department; the inauguration on January 1, 1952, of the new program for Old Age Security.

Under the National Health Program, federal grants for hospital construction and health services were taken up by the provinces at an accelerated rate. Expenditures under this program totalled more than \$24,300,000, or 28 per cent more than in the previous year. Provincial health surveys, financed by these grants, approached completion; and the National Sickness Survey, also financed under this program, was successfully carried out in co-operation with the provinces and the Dominion Bureau of Statistics. These two searching reviews of health needs in Canada and of the facilities and services available to meet them provide a firm base for future planning.

In part because of increased federal health activity and because of the imaginative and intensified efforts of members of the provincial health departments, professional health groups and voluntary agencies, the health of the Canadian people continued to improve. The rapid advances made in recent years indicate that Canada's health standards, already high, can be brought to levels as high as any in the world.

In taking over civil defence from the Department of National Defence, in February 1951, the department was confronted with a new range of responsibilities. Previously its participation in civil defence was limited to activities in the health and welfare fields, in which continued progress was made during the year with the effective and public-spirited collaboration of many citizens and voluntary organizations.

The year was one of marked progress in civil defence planning and training to prepare Canadians to cope with disaster. In its role as guiding and co-ordinating agency, the federal division was supported by a steadily developing network of provincial and local civil defence organizations. The federal program expanded notably during the year: 1,300 key organizers and instructors were trained; a national warning system was begun and 200 sirens distributed; federal grants encouraged the standardization of fire-fighting equipment; training manuals were prepared and distributed in large quantities; several hundred thousand dollars worth of training equipment was distributed free to the provinces; and arrangements for mutual aid were initiated with the United States.

The outstanding development of this fiscal year was the inauguration, with the co-operation of the provinces, of the new program for Old Age Security. Under this program, assistance was made available to those in need aged 65 to 69, and a universal pension was provided for Canadians aged 70 and over. The Old Age Pensions Act of 1927 was superseded during 1951 by three new Acts of Parliament: the Blind Persons Act, Old Age Assistance Act and Old Age Security Act.

The administrative responsibility for the new federal pension threw a tremendous burden on the department's staff and facilities. By the end of the fiscal year, 643,013 pensioners were being paid under the Old Age Security Act, administered entirely by the department. For reasons of economy and efficient control, no new administrative machinery was created to handle this vast problem. Instead, the extra work was absorbed by the Family Allowances Division. Through good planning and the wholehearted participation of the members of this division, with a comparatively small addition of staff, the new program was quickly brought into effective operation.

The same emphasis on staff economy seen in this addition holds true for the entire department. While administering the expenditure of \$498,900,000, its staff ranked 12th among federal departments, with approximately 75 per cent serving outside Ottawa. We take this opportunity to commend the members of the Department on the loyal and effective way in which they carried on their duties during the year under review.

Respectfully Submitted,

G. D. W. CAMERON,  
*Deputy Minister of National Health  
and Welfare (Health)*

G. F. DAVIDSON,  
*Deputy Minister of National Health  
and Welfare (Welfare)*

OTTAWA, April 1, 1952.

# HEALTH BRANCH

## 1. INTRODUCTION

### Administration

Scope of the activities of the Health Branch was broadened this year to take in responsibilities relating to the health aspects of Civil Defence. While the basic organization of the Branch was not altered materially, it was necessary to augment and reorient some services, particularly those dealing directly with civil defence health planning and organization, and with professional training designed to strengthen disaster medical services.

The Health Branch continued to carry on functions arising from responsibility for implementing federal health provisions, as well as to work with and through provincial, municipal and voluntary health organizations in Canada and also to co-operate with agencies active in the field of world health.

There are four Directorates in the Health Branch: **Food and Drugs**, administering the Food and Drugs Act and Proprietary or Patent Medicines Act; **Health Insurance Studies**, directing application of grants provided under the National Health Program, as well as carrying on a continuing health insurance planning assessment; **Health Services**, with 14 divisions active in many health fields, assisting and advising local authorities; and **Indian Health Services**, providing preventive services and medical and hospital care for Indians and Eskimos.

The Health Services Directorate contains the following Divisions: Blindness Control, Child and Maternal Health, Civil Aviation Medicine, Civil Service Health, Dental Health, Epidemiology, Hospital Design, Industrial Health, Laboratory of Hygiene, Mental Health, Narcotic Control, Nutrition, Public Health Engineering and Quarantine, Immigration Medical and Sick Mariners Services.

### Dominion Council of Health

Consisting of the chief health officers of each of the provincial Departments of Health as well as representatives of certain major segments of the population, the Dominion Council of Health is the principal advisory body to the Minister on health matters.

During the year the Council met twice and considered certain problems in connection with the administration of the National Health Program and the planning of Civil Defence Health Services, as well as questions of current concern to public health authorities, such as the control of the sale of horsemeat and the protection of workers exposed to ionizing radiations in certain industrial processes using radio-isotopes, etc.

Co-operation with the Provinces in the planning and development of health services generally and particularly in fostering the effective and full utilization of funds available under the National Health Program was further achieved through meetings of the following advisory committees held during the year: Canadian Council on Nutrition, Technical Advisory Committee on Public Health Laboratory Services, and the Research Sub-Committee of the Advisory Committee on Mental Health.

## International Health Activities

The Health Branch of the Department discharges certain responsibilities resulting from bilateral or multilateral international agreements. The enforcement of regulations governing the harvesting and handling of shellfish for export to the United States, under the International Shellfish Agreement; and participation in studies of boundary waters and atmospheric pollution, at the request of the International Joint Commission, are examples of such international activities. In addition, the Department has responsibility to the United Nations and its specialized agencies, as for the control of narcotic drugs and the custody and distribution of biological standards.

Canada is a member of the World Health Organization and the Department nominates the Canadian delegation to the annual World Health Assembly. The Fourth Assembly was held in May 1951 and the Canadian delegation was headed by Dr. E. A. McCusker, M.P., Parliamentary Assistant to the Minister.

Other members of the Delegation were: Dr. Pierre Gauthier, M.P. for Portneuf, Dr. F. D. Mott, Deputy Minister of Health for the province of Saskatchewan, Miss E. MacCallum and Mr. N. H. Berlis, of the Department of External Affairs, with Dr. J. B. Bundock, of this Department's Immigration Medical Service at The Hague.

At that Assembly, new International Sanitary regulations were adopted which are intended to replace a number of previously existing sanitary conventions to which Canada was a signatory.

A commentary on the work of the World Health Organization and other United Nations specialized agencies, as well as of Canada's participation in them, may be found in the report "Canada and the United Nations", published by the Department of External Affairs.

During the year the Department was also called upon to arrange programs of training in various health fields for individuals awarded Fellowships by the World Health Organization, the United Nations and the Colombo Plan.

A large number of invitations for Canada to be represented at international scientific congresses in various specialized branches of medicine were referred to the Department through the Department of External Affairs and, while very few were attended by departmental officials, every effort was made to advise those members of the profession who might be interested in participating.

## Health in Canada

At the present time the best indices for measuring the state of health or sickness in the nation include physicians' reports on death certificates and communicable diseases notifications which are received by Provincial Health Departments and are passed on to the Dominion Bureau of Statistics to be tabulated and compiled. These, along with such other data as hospital statistics and industrial absenteeism reports, provide an indication of the health of the nation.

Various communicable diseases such as diphtheria and typhoid fever have been on the decline since the turn of the century whereas the incidence of chronic diseases, including heart diseases and cancer, have been increasing over the same period. Much of the increase in these diseases has been attributed to the aging population and the improvement of diagnostic methods. The current mechanical era, with its industrial hazards and increased use of transportation facilities, has also added to the amount of disabilities and deaths

through accidents. In recognition of the changing health picture in Canada, health officers at different levels of government are gearing their health programs to meet the problems of the day.

#### *Developments in 1951-52 (fiscal year)*

Canada's Sickness Survey was completed in the fall of 1951. This survey is described in Part II of this report. The data collected during this survey are expected to provide considerable new information concerning the amount of sickness and disability which occurred during the survey year and also about permanent physical disabilities. Facts concerning the cost of payments for medical care for a period of one year will also be important for health insurance planning.

Although no serious epidemic occurred in Canada during the past year, a number of diseases showed an increased incidence. Influenza, which spread to Canada from the United Kingdom and which caused widespread disability throughout most of this country in February and March 1951, created considerable concern. More than 10 times as much influenza was reported in 1951 as in 1950, the rate per 100,000 population being 338 for the former year and 30 for the latter.

Poliomyelitis also showed a marked increase in 1951 over 1950 with a rate of 18.3 per 100,000 while the 1950 rate was 6.6. The highest incidence occurred in Prince Edward Island, Nova Scotia and Ontario.

The incidence of other communicable diseases varied considerably, some continued to have minor fluctuations during the year, while others continued to decrease still further. For example, the whooping cough case rate declined 27 per cent from the previous year, and diphtheria made a further decline of 40 per cent for the same period. Smallpox has not been reported in Canada for the past five years, and no deaths have occurred since 1939.

Tuberculosis, which is still one of the leading causes of death in the ages 15 to 39, has also shown a further improvement in case incidence with a decline of 10 per cent for the same interval. There are also indications that the tuberculosis death rate for 1951 will reach an all-time low. The rate for 1950 was 25.9 per 100,000. The United States' rate for the same year was 23. The venereal diseases, which have shown a rapid decline since penicillin was introduced in 1946, also had a 15 per cent reduction in the case incidence in 1950-51.

In the Annual Report for last year the most recent vital statistics and other indices of the health status of the Canadian people were reviewed. However, as there is little significant change from one year to the next in such figures, this year they are presented in terms of comparison with other countries. Fortunately the basic data are now being collected and published by the United Nations in the series of Demographic Year Books.

#### *Birth Rate*

For some years Canada has had a relatively high crude birth rate. In 1948, for example, it was tenth highest of 34 countries. Canada's rate of 27.0 births per 1,000 population contrasts with Costa Rica's high of 41.3 and the rates for the United States and the United Kingdom, with 24.2 and 17.9 births per thousand population respectively.

Although there is considerable variation among the provinces, all are comparatively high; the range is from 24.0 for British Columbia to 34.4 for New Brunswick. There has been a general decline since the postwar peak and the preliminary figures for 1950 show Canada's crude birth rate to be 26.6.

### *Gross and Net Reproduction Rates*

This picture of Canada's relatively high birth rate is supported in convincing fashion by the more specific gross and net reproduction rates, which measure capacity to maintain the population in the absence of large-scale immigration. Thus Canada has higher reproduction rates than the countries of Western Europe, the United Kingdom and Australia. Its rate is approximated, but not exceeded, by those of Finland, Portugal and New Zealand.

### *Expectation of Life*

Another index of the health of the people is "expectation of life at birth". For Canada in 1947 the mortality experience indicated a life expectancy at birth of 65·18 years for males and 69·05 years for females. This compares reasonably well with other advanced countries, but Canada is somewhat behind Australia, New Zealand and the Netherlands.

### *Crude Death Rate*

Canada continues to have a relatively low and declining death rate, a reflection, in part, of a young population.

### *Infant and Maternal Mortality*

While Canada has made notable progress in reducing the infant mortality in recent years, the rate is still higher than in those countries with which it is usually compared. In 1950 Canada's rate was 41 infant deaths per thousand live births, while for the United Kingdom and Denmark the rate was about 31 and in other Scandinavian countries, the United States, Australia and New Zealand the infant mortality rate was under 30. In maternal mortality too, Canada has shared in the general decline of rates.

### *Causes of Death*

In Canada and in the countries of North Western Europe, the Antipodes, the United Kingdom and the United States, the major causes of death are quite consistently, diseases of the heart, cancer and other malignant tumors, and intracranial lesions of vascular origin. The ten leading causes also generally include congenital malformations, nephritis, violent and accidental deaths, pneumonia and bronchitis, tuberculosis of the respiratory system and diabetes mellitus. As might be expected, the same order of causes prevails in the United States and Canada, but there is some disparity in the order in other countries. Nephritis and diabetes seem disproportionately important in Canada and the United States.

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## II. ASSISTANCE AND PLANNING SERVICES

In addition to its statutory health responsibilities, which are reviewed in this Report according to their functions as Hospital and Medical, Examination or Inspection and Enforcement Services, the Department extends assistance and guidance to provincial and other agencies engaged in the conservation and improvement of health.

This phase of the Department's work has assumed increasing importance in recent years and, during the past fiscal year, brought the Department into direct working liaison with practically every aspect of health activity, both official and voluntary, in Canada.

The Department continued to contribute in large measure to development of many health fields, including research related to socio-economic aspects of health matters, and supplemented its consultative and laboratory assistance by providing provinces and municipalities with informational aids for their use in enlisting public co-operation in attaining health objectives.

Many of the current activities of the assistance and planning services relate, in large measure, to the application of federal funds made available to local authorities under the National Health Program.

---

### NATIONAL HEALTH PROGRAM

#### Purpose of Program

The National Health Program was announced on May 14, 1948. At that time it was evident that, although high standards had been attained in public health in Canada, there were many gaps in the services provided. It was also evident that the corrective measures which the provincial and local governments wished to take in overcoming these deficiencies could require substantial support from the Federal Government.

This Program made federal grants available to the provinces, under certain conditions, to strengthen and extend public health services and facilities. The Program has four basic purposes:

- (a) to assist the provinces in surveying their health facilities and services;
- (b) to assume part of the cost of new hospital construction over a period of years;
- (c) to make annual grants to improve and strengthen provincial services in particular health fields;
- (d) to lay sound foundations for health insurance.

In the four years the Program has been in operation, it has been possible to plan the expenditure of over \$66,700,000 of the federal health grants made available to the provinces. Substantial progress has been made with the assistance of these grants and also because of the considerably increased expenditures on health by provincial and local governments. With this concerted effort health services in Canada are now reaching new levels.

When the National Health Program was brought into effect information about existing services and those required, as well as about the extent of ill-health and disability in Canada, was either non-existent or far from

complete. There were many needs; for example, hospital accommodation was clearly inadequate; there was a serious shortage of qualified health workers, and in many instances health services suffered because of the lack of equipment.

### Summary of Achievements

1. With funds provided out of the Health Grants, surveys of existing health facilities and services have been carried out. Most of the provincial health surveys have been received and the great body of factual information contained in these reports is now being collated.

2. To supplement the health surveys a national sickness survey of a sample group of 10,000 Canadian families has recently been carried out. This is the most comprehensive and searching study yet made of the extent and economic implications of illness in Canada. It will take some months to complete the analysis of the great mass of information gathered.

3. Federal hospital construction grants have helped materially in defraying costs of construction of 433 hospitals and hospital additions, which will provide over 36,400 additional beds, thus nearing the five-year objective of 40,000 beds.

4. Federal funds under the various grants have made possible the training of over 3,300 additional health workers. During the fiscal year 1951-52, 3,048 full-time and 1,108 part-time health workers were employed on provincial and local health staffs with the aid of the grant funds.

5. Provincial and municipal health facilities and services were also strengthened by the purchase of additional technical equipment and the extension of both preventive and treatment services. These and other new developments under the federal program have enabled the provinces to intensify their campaigns against major health hazards such as cancer, tuberculosis, mental illness, venereal disease, arthritis and rheumatism, crippling conditions in children, and others.

6. There has been a significant increase in health research in Canada because of the additional federal funds provided.

### Federal Aid to Hospital Construction

In the past four years, federal aid has been approved for 433 new hospitals or hospital additions with 36,400 additional beds. Of these 36,400 beds, almost 20,700 have been provided in general hospitals; 4,000 are for chronic and convalescent patients; 8,000 will serve mental patients and over 3,700 beds are for tuberculosis patients. Moreover, assistance was given towards the construction of 1,158 nurses' beds. Assistance approved to the provinces for the construction of hospitals, nurses' residences and health centres since the inception of the National Health Program now totals \$39,223,600.

The federal Hospital Construction Grant provides that for all approved projects, under certain conditions, \$1,000 is available for each bed for active treatment and \$1,500 for each bed for mental, tuberculosis, chronic and convalescent patients. By making a larger grant available for the latter type of hospital accommodation, the building of accommodation for long-stay patients is encouraged, thus releasing more active treatment beds for their proper purpose.

Federal grants are also given towards the construction of community health centres which combine hospital accommodation with facilities for preventive and treatment services. At the beginning of the fiscal year 1951-52 the hospital construction grant became applicable to the construction of

nurses' residences. This step, besides providing financial assistance to hospitals which construct accommodation for their nurses, had as its aim to improve the living conditions of nurses, which, in turn, should contribute to the alleviation of the shortage of nursing personnel. Assistance on the basis of \$500 per approved bed is available to hospitals under certain conditions.

Another extension of the Hospital Construction Grant applies to the construction of combined laboratories—i.e.—a laboratory contained in or connected with a hospital and providing public health laboratory services in conjunction with diagnostic laboratory services to both out-patients and in-patients of the hospital. Such a laboratory can qualify for a grant on the basis of \$1,000 per 300 square feet, up to a maximum of 25,000 square feet. This provision applies only to laboratories commenced after April 1, 1951. Hospitals are thus being encouraged to combine their laboratories so as to make the best possible use of pathologists and other highly-trained staff and also to economize on equipment costs.

In order to raise the level of hospital accommodation the Hospital Design Division of the Department has established special standards. These standards have tended to lessen overcrowding in hospitals and to reduce the number of large wards that were commonplace in older institutions.

In addition to assistance toward the cost of construction of hospital buildings, provision is also being made toward the purchase of technical and scientific equipment under several grants such as those for crippled children, mental health, tuberculosis control, general public health, and cancer control, in their respective programs. Through these grants hospitals may receive funds for the purchase of certain technical equipment provided that the hospitals concerned do not derive any revenue from the equipment purchased. Provision of apparatus for the admission chest X-ray program and various clinics in hospitals can be quoted as examples of this type of assistance.

Federal grants have already added large numbers of nurses, nurses' aides, laboratory technicians, hospital accountants and other health workers to hospital staffs and have made possible additional training for hospital personnel in many fields.

The trend in recent years has been to make hospitals the centres of community services. This movement has been encouraged by provincial grants and is further reinforced by the federal government's contribution.

### **Services for Children**

With the aid of the various grants, health services for children have been greatly strengthened. As part of a preventive program, there has been a decided increase in child and maternal care, in pre-school and school medical and dental programs, in mental health services for children, and in facilities for the care of crippled children.

All provinces had programs for child and maternal health developed before the inauguration of the National Health Program, but federal aid has made possible a considerable expansion in facilities and services. Child and maternal health programs now concern themselves with the health of the mother before and after confinement and the health care of the child at every stage of development.

Federal assistance has made possible the establishment of special school health services in every province. Audiometric test services, the medical examination of pre-school and school children and preventive dental services are some of the extensions of school health services made possible by the grant funds.

The federal health grants are enabling the provinces to make modern diagnostic, evaluation and treatment facilities more readily available to children crippled by accident, disease or inherited defect. The lack of trained physiotherapists, which has been one of the most serious difficulties in caring for the needs of crippled children, is slowly being alleviated. Every province is intensifying its program for the prevention and correction of crippling conditions in children, and for the rehabilitation and training of crippled children.

With federal assistance, the expansion of child guidance work in Canada has been marked in the past four years. In addition to providing funds for the establishment and operation of an increased number of mental health clinics, preventive activities have been further supported by providing psychological services in schools. Teacher-psychologists are giving valuable assistance to various clinics and schools throughout the country.

### **Cancer Control**

Under the National Health Program, a grant of approximately three and a half million dollars annually is made available to the provinces on a matching basis in order to combat cancer. The purpose of the grant is to assist all the provinces in improving their efforts in the cancer control field. The ultimate objective of the program is to ensure that no person suffering from cancer will be denied the assistance required for the detection, diagnosis and treatment of the disease, regardless of where he might live or of his ability to pay.

In the early stages of the program the provinces generally were unable to take full advantage of the federal funds available. With each passing year, the utilization of the moneys available for this essential purpose has steadily increased until, in the past fiscal year, projects were submitted by the provinces calling for the expenditure of more than 65 per cent of the moneys available. Three provinces were able to make full utilization of their allotments under this grant.

The projects submitted by the provinces under the Cancer Control Grant cover a very wide field. With the assistance of the grants the provinces have been able to extend their laboratory and pathological services, to employ and train additional cancer specialists, to purchase radium, to extend their free diagnostic services, to set up provincial case registries and to intensify their programs of health education which are considered so essential to success in the fight against this disease.

A most important area of action and one that perhaps holds the greatest hope for the future is in the field of research. In this connection it is noteworthy that each of the provinces has earmarked a portion of its federal grant for the National Cancer Institute to support its extensive program of research into cancer.

### **Tuberculosis Control**

The death rate for tuberculosis continues to decline without interruption. In 1950 there was a total of 3,582 deaths from tuberculosis across Canada representing a death rate of 25.9 per 10,000 population. This is a new record low contrasting with a death rate of approximately 200 per 100,000 at the turn of the century.

Over the past year more than \$4,000,000 or 85 per cent of the federal funds available for this purpose was actually expended by the provinces to strengthen and intensify their tuberculosis control activities. A four-fold approach has been developed to include efficient case-finding; adequate treatment facilities; successful rehabilitation of the patient; and finally a vigorous program of prevention.

Case-finding and detection services have centered around the hospital admission chest X-ray program, and the extension of mass survey activities through the use of mobile clinics and the undertaking of specific surveys. Since the National Health Program began in 1948, more than \$2,150,000 had been approved for the operation and development of the hospital admission chest X-ray program. To assist with the mass survey activities, 17 new travelling clinics have been established and 10 existing mobile clinics have been strengthened. Substantial funds have also been provided towards the support of established stationary clinics throughout the provinces.

In every province treatment facilities have been greatly strengthened with the aid of funds provided under the Tuberculosis Control Grant. Substantial quantities of special equipment have been provided both for sanatoria and clinics. During the past year special training has been provided for more than 75 physicians, nurses, laboratory technicians and other health workers, and sanatoria services have been strengthened by the employment of additional professional staff. With the aid of the Hospital Construction Grant significant progress has been made in overcoming the shortage of beds for tuberculosis patients by the building of new institutions or of extensions to existing sanatoria.

One of the most noteworthy contributions to the treatment of tuberculosis has been the federal assistance towards the purchase of streptomycin, P.A.S. (para-amino salicylic acid), and tibione. Before the inception of the grants program the use of streptomycin was reserved for the most urgent cases and in many instances was not provided free of charge. It is now made available without cost to all patients in sanatoria who might benefit from this form of therapy. Federal allocations for the purchase of streptomycin and other drugs to be used in the free treatment of tuberculosis patients now total more than \$1,669,000.

The rehabilitation of the tuberculosis patient is gradually receiving greater recognition and during the current fiscal year federal grants were approved for various projects in this field on behalf of 8 of the 10 provinces. For the most part these projects have been for the employment of additional staff and the purchase of special equipment for rehabilitation work.

As to prevention, the use of B.C.G. vaccine is being adopted more widely throughout the provinces for the immunization of children and adults. Substantial support has been given to this program through the federal Tuberculosis Control Grant. Other preventive measures supported by grant funds are concerned chiefly with public education through the use of films and other information media.

## **Mental Illness**

Through funds available under the National Health Program, a community mental health program is being developed on a nation-wide scale. The Mental Health Grant is being used by the provinces to augment existing services provided by provincial divisions, for assistance to mental hospitals, for establishment of mental health clinics and psychiatric clinics in general hospitals, for research into mental illness and, perhaps the most important aspect, for the training of mental health personnel. Prior to the introduction of the federal mental health grant there were, in Canada, 14 full-time mental health clinics operating in school systems and five part-time clinics. Since then, 33 additional clinics (mental health, child guidance, and travelling) have begun work or are planning to start in the near future. Moreover, assistance was extended to 16 existing clinics by way of employment of additional staff and the purchase of necessary equipment.

The program of psychiatric care in general hospitals in Canada has also been enlarged considerably since the National Health Program began. Out-patient psychiatric clinics are operating at the general hospitals in St. John's, Newfoundland, Halifax and Saint John, New Brunswick. The Province of Quebec is setting up psychiatric clinics in five hospitals in the Quebec City area and 11 in Montreal and the surrounding district. The out-patient clinics for epileptics in Quebec and Montreal are being extended and a day hospital for psychiatric treatment has been organized at the Montreal General Hospital. Out-patient services at the Toronto Psychiatric Hospital are being increased and an out-patient service has been started at Victoria Hospital, London. The mental health service at the Toronto General Hospital (Wellesley Division) was extended and a mental health service at the Hospital for Sick Children has been provided. The facilities of the Psychopathic Hospital in Winnipeg and the Munroe Wing in the Regina General Hospital have been expanded. The Crease Clinic at Essondale, an outstanding example of a modern mental centre, was substantially assisted.

Federal funds are being allocated to mental hospitals for the employment of personnel ranging from psychiatrists, psychologists, psychiatric social workers and psychiatric nurses to occupational therapists, rehabilitation officers, teachers and attendants. Moreover, funds are being allocated for the enlargement of provincial mental health divisions as well as the extension of existing services. Under the federal Mental Health Grant more than 40 much-needed research projects are being developed.

### **Venereal Disease Control**

As in previous years a grant in excess of half a million dollars was made available to assist the provinces in maintaining and extending their established venereal disease control activities. To round out the various provincial programs, projects assisted under this grant were closely correlated with existing measures financed both by provincial funds and the earlier federal grants.

Funds were utilized to aid in the maintenance of clinics, including mobile units, for diagnosis, treatment and consultation, as well as for the provision of free treatment in hospitals. Federal grants were also used to support laboratory services and in most provinces such services are now available to private practitioners at no cost. Free drugs for the treatment of venereal disease are also being provided to physicians.

Under the program definite advances have been made against the venereal diseases. However, in spite of the reduction in the numbers of infections and the cost of drugs, the pronounced rise in the cost per case detected and for necessary facilities and personnel has required that expenditures be sustained at a fairly constant level. The venereal disease problem persists as a serious threat and in order to cope with it intensive effort and adequate expenditure will be needed, not only in protecting the public health as a whole, but also in support of the defence effort, both the Armed Services and essential production.

In dealing with the problem, each provincial program has placed increasing emphasis on preventive and early detection measures including public education, intensive case-finding programs through mass blood testing, special examinations and contact tracing, as well as post-treatment follow-up. To perform these and related activities, federal grants are being widely used to strengthen provincial staffs through the employment of physicians, nurses, medical social workers and other trained personnel.

Included also is the exploration of new methods and techniques to evaluate their effectiveness in attacking the V.D. problem, applying those of demonstrated value in further reducing the prevalence of these infections. While

certain aspects of the problem have shown encouraging response there yet remain other particularly obstinate features which must be the focus of a concerted control effort. The continuing utilization of all resources will best ensure the ultimate objective of effective disease control.

### **Arthritis and Rheumatism**

Although the National Health Program does not include a specific grant for arthritis and rheumatism, considerable support was provided to provincial activities in this field through federal funds available under the General Public Health Grant, the Professional Training Grant and others. In every province a portion of the former grant was earmarked for assistance to the Canadian Arthritis and Rheumatism Society which, through its national headquarters and various provincial branches, is the co-ordinating agency for all activities directed against these crippers.

Besides this financial support to the Canadian Arthritis and Rheumatism Society a substantial grant was made to the National Research Council for research in the use of A.C.T.H. and cortisone. All provinces have allotted a portion of their share of the General Public Health Grant for this purpose.

Federal funds were also used by the provinces for the purchase of equipment and supplies for arthritis and rheumatism clinics and for physiotherapy departments in general hospitals. With the assistance of the federal grants a number of mobile clinics have also been established to bring diagnostic and treatment services to persons previously outside the range of existing clinics. Grant funds were also used to a limited extent for the training and employment of needed professional personnel to staff the various clinics.

### **Training of Health Workers**

Federal funds available under the Professional Training, Tuberculosis Control, Cancer Control and other grants were used widely by the provinces to assist in the training of hospital and public health personnel. Federal allocations for this purpose exceeded \$1,200,000 during 1951-52.

During the year, a total of 1,357 health workers received professional training under the terms of the various grants. This number includes 510 nurses who were trained for public health work, for instruction and supervision in general hospitals, and for special work in such fields as obstetrics and mental health. In addition, 264 physicians received special training for work in provincial health departments or in other areas of public health work and in several specialized fields.

For work in the mental health field, 174 persons were given special training during the year. This number includes psychiatrists, psychologists, psychiatric social workers as well as therapists. Training was also provided to workers in many other fields of public health, including technicians for laboratory work, veterinarians for food control and milk supervision, engineers and inspectors for sanitary work, and dentists, health educators, hospital accountants, statisticians and a great variety of others.

The training of health workers continues to be a necessary means of assisting the provinces in developing their various services. It is therefore anticipated that the provinces generally will continue to make full use of the federal funds available for this purpose. In addition to providing special training, federal funds under the various grants were utilized to assist the provinces in employing more than 4,000 health workers to help staff provincial and local services.

## BLINDNESS CONTROL

The Blindness Control Division carried on its work of encouraging the preservation of vision and the control of blindness through the medium of pamphlets, educational films and the supplying of material for radio programs produced by the Information Services Division. Assistance was given to various provincial authorities concerning visual problems.

Attention continued to be focused on the work of the four Glaucoma Clinics—one in Toronto, two in Montreal and one in Quebec. Plans were submitted to provincial authorities to assist in the formation of additional clinics. The control of glaucoma is Canada's most serious eye problem. The disease is common after age forty. It is insidious in onset and can only be diagnosed in its early stages, when treatment is most effective, by a medical eye specialist. Chronic glaucoma causes more blindness in Canada than any other eye disease.

A report was received on "A Survey of Methods used to Reveal Eye Defects in School Children" by oculists at the Hospital for Sick Children, Toronto, the survey being financed by a federal health grant. The very comprehensive report indicated that, by the proper use of the standard Snellen Chart, the vision of school children could be effectively screened by the school nurse or teacher if instructions and visual standards detailed in the report were followed.

### Treatment Plan

As a result of the success of the experimental treatment scheme for blind pensioners carried out during the past several years, the program was put on a permanent basis. Newfoundland, Nova Scotia, New Brunswick, Quebec and Ontario have agreed to take advantage of the treatment scheme. Most of the treatment so far given has consisted of cataract extraction. The federal government contributes 75 per cent of the cost and each province the remaining 25 per cent.

The study into hereditary optic atrophy in a large family connection in the Ottawa area has been continued in collaboration with the Nutrition Division. Much valuable genetic information has been obtained and enough encouragement has resulted from the treatment of the few cases which have developed since the study started to justify the continuance of the investigation for a number of years. The study encompassed the largest family connection having hereditary disease which has ever been reported. More than 1,100 blood relatives are concerned, in some 270 families, a proportion of whom have a predisposition to blindness on the male side.

### Study of Prevention

Further study was given to major blindness prevention problems. It is estimated that nearly half of all cases of blindness could be prevented by adequate treatment and that useful vision could be restored to at least 12 per cent of those now blind.

In connection with the administration of pensions for the blind (now called Blindness Allowances) the Blindness Control Division co-operates with the Welfare Branch in the administration of the Blind Persons' Act. The oculists who make the examinations are approved by the Minister and the eye reports are reviewed in the Blindness Control Division and blindness certificates are issued which enable the provinces to proceed with the payment of the blindness allowances under the provisions of the Blind Persons' Act.

To enable applicants for blindness allowance in outlying places to receive proper eye examination, oculists were sent to Newfoundland, Magdalen Islands,

Gaspé area and some outlying portions of other provinces. It is noteworthy that more applications for blind pension, or blindness allowance, were received in outlying districts and areas where economic conditions are not good and where medical services are inadequate.

The Blindness Control Division maintained co-operation with the Canadian National Institute for the Blind. The Institute supplied eye glasses free or at cost to many unsuccessful applicants for blind pension who needed only glasses to improve their vision. In addition, the Institute supplied the Department with many eye reports and gave other essential assistance.

It is interesting to report that since January 1, 1952, under the provisions of the Blind Persons' Act, Indians and Eskimos have become eligible for blindness allowance.

The total number of blind persons registered by the C.N.I.B. at the end of 1951 was over 19,000 and the number of those receiving blind pension at that time more than 11,000.

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## CHILD AND MATERNAL HEALTH

Grants under the National Health Program have assisted greatly in improving maternal and child health in Canada and the Department's Child and Maternal Health Division continues to work with provincial health authorities and others in their efforts to bring about further advances.

By assisting the provinces, conferring with officials of the Health Insurance Studies Directorate in considering applications for federal aid for maternal and child health projects, programs for crippled children and research associated with such work, and by carrying on intensive health education, the Division is taking an active part in the national drive to reduce mortality and morbidity among mothers and infants.

### Infant Mortality

It is apparent that the country is still losing too many infants but this situation continues to improve and there has also been a heartening reduction in the maternal mortality rate.

In 1950, out of every 1,000 babies born alive, 41 died during the first year. Deaths numbered 15,324. To this must be added those who were stillborn—7,179—making a total loss of 22,503. Child and maternal health statistics for the years 1926 to 1948 may be found in Table 1, p. 112, of the Annual Report of the Department for 1949-50. (See also Child and Maternal Health and Crippled Children, p. 29, in the Annual Report for the fiscal year ended March 31, 1951).

Of the 15,324 deaths which occurred in the first year, 9,018, or about 59 per cent, occurred during the first month. If the stillborn deaths are added, it is evident that the main emphasis must be placed on the care of the mother during pregnancy and on the care of the infant during the first few weeks of life.

Deaths in the first week comprise about 44 per cent of all deaths in the first year, or 6,553 out of a total of 15,192 (1949 figures).

The number of stillbirths which occur in a year is equal to half the total infant deaths in the year (7,275 out of 15,324) emphasizing, again, the need for adequate prenatal care and skilled attention at confinement.

About three-quarters of the births in Canada take place in institutions (72 per cent in 1948). British Columbia, Alberta and Saskatchewan had the highest percentages—96, 95 and 91 respectively.

Each year nearly 10,000 babies are born without a doctor in attendance, (9,678 in 1949). Many of the mothers were long distances from doctor or hospital and, no doubt, many of them lacked prenatal care. In passing, it should be noted that such mothers have the greatest need for health education and efforts are made to provide them with authoritative information on prenatal care and maternity by all informational means at the disposal of government.

The leading causes of infant deaths in 1950 were: respiratory diseases—pneumonia, 2,153, influenza, 296, bronchitis, 108—a total of 2,557; immaturity—2,273; congenital malformations—1,839; injury at birth—1,574; and diarrhoea and enteritis—1,092. In 1950, whooping cough caused the death of 234 infants under one year. (Deaths over that age numbered 23). This indicates the need for having babies immunized at an early age.

### **Child Morbidity**

Surveys show that about 15 per cent of children are in some degree physically under par when they enter school and the percentage increases gradually during the first four grades, reaching the high proportion of 40 per cent, which applies for several years.

As the problem of child morbidity thus demands the highest priority education appears to be the most effective preventive measure, particularly during the prenatal period when parents are most receptive to guidance concerning the welfare of the baby. This educational effort should be continued during the pre-school period when the family's attention is centred on the child's welfare and development.

### **Federal Health Grants**

Under the National Health Program, grants aimed at helping child and maternal work have assisted in the establishment of many worthwhile services. Two provincial divisions of Child and Maternal Health have been created; five provinces have purchased incubators for many of their hospitals; a Division of Child and Maternal Health is being set up in Quebec City; in New Brunswick, the director of the new Division of Child and Maternal Health has encouraged a number of local medical societies to set up committees to study infant and maternal morbidity and mortality.

During the year, under the National Health Grant for Crippled Children, all provinces have set up facilities for the care of cerebral palsy cases and have reinforced their services for crippled children.

### **Educational Work**

The past year's activity of the Child and Maternal Health Division included a continuing educational program.

In this field the main media were publications. The books, "The Canadian Mother and Child" and "Up the Years—From One to Six", were distributed widely, but it was not possible to provide them to all who needed them or could use them profitably.

Since "The Canadian Mother and Child" was first printed, in 1940, 1,250,000 copies have been distributed. This book continues to be particularly useful in areas remote from medical care, but even urban mothers follow its advice and the book is widely recommended by attending physicians and clinics.

"Up the Years—From One to Six" also proved increasingly popular and efforts were made to maintain stocks of other publications constantly sought from the Department, including the "Daily Diet for Mothers" card and the folders on "Whooping Cough", "Poliomyelitis", and "Ten Points to Remember—Before and After Baby Comes". The color-film "Mother and Her Child", and the filmstrips "Nine to Get Ready" and "Introducing Baby", also proved useful to public health nurses as teaching material.

### **Research Work**

Research activities included publication of the final report on the British Columbia Wetzel Grid Study. The Report is being made available to those interested in use of the Grid, as an adjunct to school medical services.

A research project on Breast Abscess and Pustules in Babies was undertaken in Winnipeg, under direction of one of the Division's pediatric consultants, assisted by the nursing consultant. Assistance was also given by the Provincial Laboratory.

The nursing consultant spent some months in British Columbia and Saskatchewan consulting with hospital and public health officials concerning their programs for the care of premature babies. Consultations and institutes were held with groups of nurses in hospitals and in the field.

The Division was called upon to advise in regard to the development of provincial services functioning on behalf of mothers and children. The Director conferred with specialists and others on the advisability of concerted national action on Maternal and Child Health and presented a brief concerning this proposal to the Dominion Council of Health.

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## **DENTAL HEALTH**

To meet the burden of tooth decay, periodontal disease and malocclusion in Canada by treatment alone is far beyond the capacity of the dental profession, but the solution to the problem does not lie so much in expanding the dental profession as it does in reducing the incidence of disease and malocclusion by the use of preventive methods. There is sound reason to believe that, with the effective exercise of our present knowledge, and the co-operation of an informed public, well over half of the burden could be inexpensively prevented. Then, with a small expansion of the dental profession, aided by an adequate supply of dental hygienists, the balance could be handled by initiating early, regular, systematic treatment of children, beginning with the pre-school child.

Therefore, the efforts of the Department's Dental Health Division have been directed to research in the preventive field, health education, and the development of properly organized, early treatment programs for children. In addition to this work, and in some instances in relation to it, other services have been provided for most of the other divisions in the Department as well as for provincial departments of health and for the Canadian Dental Association.

### **Fluoridation Study**

The Brantford-Sarnia-Stratford Water Fluoridation Caries Study was continued during the year with the examination of 1,400 children at Stratford, Ontario. The Department's first report on this study, covering 1,800 children at Brantford and 1,800 at Sarnia, was issued in September, 1951 and amended

in January, 1952 by the addition of data relating to 1,400 Stratford children who had been examined during October and November, 1951. Both reports were reproduced by the Journal of the Canadian Dental Association.

The findings indicated that the caries incidence had worsened slightly between 1948-51 in both the Sarnia and the Stratford control groups of children and that an appreciable decrease in caries incidence had occurred in all ages of the test group at Brantford, where one part per million of fluorine in the form of sodium fluoride, has been added to water since June, 1945.

The relationship between the presence of fluorine in a water supply and its presence in tooth tissues is being investigated. Extracted teeth are obtained annually in all three cities. These are analysed by the Food Chemistry Department of the University of Toronto.

During the year many communities became interested in water fluoridation and the Division's officers were called upon to answer a large number of questions and to address many interested organizations.

To meet the needs of public health officials planning water fluoridation an outline of recommended procedure has been prepared. This outline includes standardized methods of recording caries experience, standardized examining methods and essential statistical procedure. The aim is to provide health officials with a reliable basis for reports, to facilitate obtaining additional information concerning dental effects of fluoridation, and to make possible a comparison of data between fluoridating communities in different parts of Canada.

## Other Studies

In conjunction with the water fluoridation caries study, and using the same samples of children, a study was made of the public health application of a new method of measuring quantitatively the prevalence of gingivitis in a population group. This method, devised by the University of Illinois and called the P-M-A Index, provides a quick method of recording information relating to three segments of gum tissue adjacent to each tooth, i.e., the interdental papilla, the marginal gingiva and the attached gingiva. It gives promise of having a broad usefulness where it is desired to obtain reliable information concerning gingivitis resulting either from local or systemic conditions affecting population groups.

Assistance in making the P-M-A Index Study was given by the Ontario Department of Health. A bacteriologist and periodontist from the University of Toronto was retained as a consultant. Statistical work in connection with both the caries study and the P-M-A Index Study was supervised by the Research Division and much help was received from the Nutrition Division.

A dentist and dental nurse assisted the Nutrition Division on a survey of a sample of 1,000 Indian children located at various points across Canada and also on a survey of school children at St. Vital, Manitoba. This provided an opportunity to obtain data on dental health conditions in different segments of the Canadian population.

## Model Preventive Service

The pilot model of a Dental Preventive Service set up last year was continued. The purpose of this project was primarily to develop and evaluate a purely preventive dental service in relation to a general health service such as that provided by the Civil Service Health Division. In addition, it was desired to ascertain the value of dental hygienists in such a service where the group being served is large enough to require additional staff.

## Informational Work

The demand for dental health educational materials, produced in co-operation with the Information Services Division, reached an all-time high during the year. The entire stock of certain publications was completely exhausted long before the end of the year, with the demand from the provinces still being pressed. The Dental Health Manual produced for the use of teachers and others engaged in teaching dental health proved very popular.

Scientific dental health exhibits are now routinely requested for all major dental conventions in Canada and there are advance requests two years ahead. These exhibits are accompanied by an information officer from the Information Services Division and a dentist from this Division. In most cases this team appears on the general program of the convention dealing with dental health subjects.

While the division's publications, reports, exhibits and posters have been much more widely used than its films and filmstrips, these too have come in for considerable favourable comment and use. One film, after receiving an international award at a film showing in Venice, was purchased by the film library of the Encyclopaedia Britannica.

## Federal Health Grants

Co-operation with provincial departments of health in the development of sound dental projects under the federal grants has been a major activity. The following are examples of dental health projects supported by federal health grants in various provinces—treatment and health education services for pre-school and early grade school children; dental clinics for children in rural areas; post-graduate training in public health dentistry; assistance to certain provincial and municipal health departments to provide dentists and dental hygienists for the treatment of school children; equipment and staff for mobile clinics serving children in rural areas; studies concerning tooth decay, cleft palate and the use of sodium fluoride in caries control.

The Division aims at a close working relationship with its counterpart in each provincial department of health. Eight of the ten provinces now have active dental health divisions operating under the direction of a dentist with a public health degree. Five of these have been created during the last three years, with the help of federal health grants. The division also continues to maintain close liaison with the Canadian dental profession.

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## EPIDEMIOLOGY

The Epidemiology Division performs three major services: prevention and control; technical information; and research studies, including statistical analysis. In providing these services, considerable time is expended by divisional personnel in giving technical assistance to and consultation on numerous projects, or enquiries related to these services. Although a few projects are entirely confined to divisional participation, most investigations and field studies are carried out in co-operation with other divisions or departments at various levels of government, or with voluntary agencies, including universities.

## Federal Grants

During the past year a number of federal research and general public health grants, which had an epidemiologic application, were approved. Consultative assistance was given by the Epidemiology Division on many of these projects. Projects were undertaken in almost every biological classification of disease, as well as on a number of studies relating to chronic disease and public health administration in epidemiology.

For example, a Division of Communicable Disease Control was established in New Brunswick. Among the chronic diseases, multiple sclerosis prevalence studies were continued in Montreal, Winnipeg and Kingston as well as in the province of Saskatchewan. A diabetes survey, to determine a more accurate incidence of this disease in the general population, was carried out in three representative communities in Ontario.

Considerable attention was given to virus research in Canada. Two separate studies to determine the prevalence and characteristics of Lansing strain poliomyelitis were conducted amongst Eskimo populations in northern Canada by research teams in Ontario and Quebec.

Other epidemiologic studies on encephalomyelitis in Saskatchewan, "Q" fever in Quebec, and the production of influenza vaccine for trial purposes, have all been carried out through Health Grants during the past year.

Studies on parasitic and mycotic infections have similarly been supported by Health Grants. The incidence of cercarial dermatitis, trichinosis, and dog tapeworm, have all been under study in Ontario; a survey to determine the prevalence of histoplasmosis in the province of Quebec has also received support.

The above mentioned projects by no means exhaust the list of epidemiologic studies which have been supported by this department through the federal Health Grants. Studies of long standing, such as the Sylvatic plague and Rocky Mountain spotted fever detection surveys in Saskatchewan and British Columbia, have continued to receive support, as have diphtheria immunity and carrier studies in Ontario. Tuberculosis, as well, received its share of assistance. Some of the more important epidemiologic projects for tuberculosis include case-finding programs through the routine X-ray examination of hospital admissions, and the mass X-raying of the general population. The improved production of BCG vaccine, along with its continued use, particularly in the province of Quebec, has also been carried out.

Two studies on the epidemiology of *Staphylococcus Aureus Hemolyticus* received both financial and consultative assistance,—one in Vancouver on the incidence of pustular infections in the nurseries of the Vancouver General Hospital, and the other a research investigation into the spread of breast infections in Winnipeg hospitals.

## Consultations

Technical and consultative assistance has been given the Department of Public Health and Welfare, Province of Manitoba, in investigating an undue incidence of breast infections which have been occurring in Winnipeg hospitals over the past few years. At the height of the epidemic in 1948 the incidence of infection in one hospital reached 14 per cent of all confinements. Since that time the incidence has fluctuated from less than 1 per cent to 10 per cent.

In response to requests from provincial health departments, the latest information on the effect of inoculations and other injections on the incidence of poliomyelitis, as well as the value of the use of influenza vaccine as a control measure, was distributed to all provinces.

The Northern Administration and Lands Branch of the Department of Resources and Development, and the Indian Health Services, consulted the Epidemiology Division last summer for assistance in controlling an epidemic of paratyphoid "B" at Gros Cap, N.W.T. In this instance, a fish packing plant which quick-froze fish for an international market was involved.

Material and consultative assistance have been provided in carrying out a diphtheria carrier study among navy personnel on the west coast; consultant service was given to the department's studies on hereditary optic atrophy in the Ottawa Valley and hydatid disease in northern British Columbia; and the Division extended technical assistance and planning services related to the International Joint Commission's Air Pollution Study in Detroit and Windsor. Assistance was also given to the Civil Defence Co-ordinator in establishing a reporting system for morbidity and mortality statistics for civil defence purposes.

### Research and Survey

Aside from the projects which have received financial support through federal health grants, and in which the Epidemiology Division is giving technical and consultative assistance, a number of local research studies in Ottawa and vicinity were also in progress. These were largely in conjunction with other divisions within the Department and the City of Ottawa Health Department. Among the more important of these projects was a Multiple Sclerosis Prevalence Study, associated with the Ottawa Chapter of the Multiple Sclerosis Society of Canada, and the Ottawa Academy of Medicine; a study to determine the incidence of Puerperal Mastitis in Ottawa; an investigation to study the protective value of influenza vaccine amongst the aged and debilitated in Ottawa's institutions; and a Poliomyelitis study to determine the effect of injections and other possible "trigger mechanisms" on the incidence of this disease.

### Items of Special Interest

The Division continued to have the prime responsibility for the co-ordination of the department's activities in directing Canada's Sickness Survey during 1950-51-52. This survey is the largest project of its kind that has ever been undertaken in this country, and the results from it are expected to have wide and varied uses once the mass of data has been analyzed. As well as obtaining estimates of the volume of sickness and permanent disabilities which occurred in Canada during the survey year, information on payments for medical care and types of service received will also be compiled. Other valuable information relating to disease incidence and medical care planning is expected to result from this survey.

The 59th meeting of the Dominion Council of Health requested that the Epidemiology Division collaborate with provincial health departments in the planning of a "model" communicable disease reporting system for Canada, with a view to standardizing and improving this procedure throughout the provinces. There is a great need for an improved and unified disease reporting system as, at present, considerable variation exists in both the number of diseases reported and their control in various provinces.

In January, 1951, the Tuberculosis and Venereal Disease Control Division of the Department was merged with the Epidemiology Division. This amalgamation had been visualized for some time, and was based on the observation that many communicable diseases, including venereal disease, have greatly diminished as health problems during the past ten years.

A new service, which is becoming increasingly important to the Department, is the drafting section of the Epidemiology Division. The section provides a service to divisions within the Department in depicting scientific data through the preparation of various graphs, diagrams and tables, which may be used for publications or lectures.

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## HOSPITAL DESIGN

The Department has taken an active part in promoting hospital construction in Canada with the provision of assistance to Provinces under the Hospital Construction Grant of the National Health Program and by assistance to administrators and architects in the design and planning of hospitals, through the facilities of the Hospital Design Division. A consultant service has been provided for those concerned with hospital design, giving constructive criticism of plans and determining the overall planning policy for various types of hospitals. The field covers not only general hospitals of all sizes but chronic and convalescent hospitals, mental hospitals and public health buildings.

This is the close of the first four years of a five-year federal Hospital Construction Grant Program. In 1948 there existed an urgent need for hospital beds of all types, and considerable progress has been made throughout Canada in meeting the shortage of active treatment beds. The objective set was 40,000 new beds of all types and, to date, more than 36,400 beds have been either completed or approved for construction. These can be broken down into 20,700 active treatment hospital beds, 4,000 chronic and convalescent patients' beds, 8,000 mental beds and 3,700 beds for tuberculosis patients. The federal contribution towards this accommodation was \$39,223,000. During the year 84 new projects were approved.

A change in the Order-in-Council for 1951-52 permitted increased scope in the Hospital Construction Grant by making available a grant of \$1,000 for each 300 sq. ft. of floor area of a hospital devoted to combined laboratories, and a similar grant for areas devoted to outpatient services.

For the first time federal aid was given to assist in the construction of nurse's residences on the basis of \$500 for each nurse's bed and there was a total of 1,158 nurses' beds approved for federal assistance in the past year.

Besides being of material assistance to hospital construction throughout the country, the grant has contributed to the raising of the general standard of hospital design because, to be eligible for assistance, a construction project must conform to the minimum standards which have been set up by the Department, after consultation with the provincial Health Departments and leading hospital authorities.

At the request of the U.S. Public Health Service, 50 copies in French of the Division's Standards and booklet were forwarded for use in the Far and Near East in areas where only French is spoken.

## INDUSTRIAL HEALTH

The Industrial Health Division continued to provide technical and consultative services and to act as a central source of information for provincial Health Divisions and Health Departments. It also provided technical aid to federal agencies, including crown companies, on various aspects of occupational health. Activities are classified into four main groups; assistance to provincial programs; medical and nursing consultative services; laboratory services, including research and surveys; and educational and technical information services.

### Federal Health Grants

Through the General Public Health Grants, financial assistance totalling \$274,361, was given to the provinces. \$110,549 was approved for Ontario and of this amount \$85,199 is being used to organize an Industrial Health Services project at Kitchener. Other grants were to the University of Toronto for a survey of atmospheric pollution, an investigation of the effects of noise on hearing, and an investigation of the physiological effects of Alumina, Silica, etc.; to the Division of Industrial Hygiene for equipment including that required for a travelling X-ray unit.

The Quebec Division of Industrial Hygiene received \$131,187 for reorganization and expansion of the Division of Industrial Hygiene. Nova Scotia and New Brunswick received grants for equipment and expansion of laboratory services, respectively. Saskatchewan was given a grant for the employment of a Director of Occupational Health.

### Research and Surveys

New and enlarged laboratory facilities were brought into operation during the fiscal year. Officers of the toxicology section, in conjunction with the clinical staff, continued to provide scientific and medical advice to provincial Departments of Health, other federal agencies, and industries. This section also carried out a series of animal experiments to determine the toxic effects of the new organic insecticide, Aldrin, and this work is to be continued during 1952-53.

The Field Surveys Section concentrated on two specific projects during the fiscal year. The first of these was a study of the exposure of Quebec apple growers during the application of the new insecticide, Parathion, which has been responsible for a number of deaths and cases of severe illness throughout North America during the past two years. The second project was the first stage of a comprehensive environmental survey of the Yellowknife, N.W.T. area, where arsenic from roaster fumes has contaminated the townsite and adjoining territory. Both of these projects will be continued during the summer of 1952.

The Physics Section made use of X-ray diffraction to determine the quartz content of dust samples submitted by the provinces, and has procured an Advanced Philips Electron Microscope to facilitate microscopic research.

The Chemistry Section carried out various tests on the efficacy of industrial respirators because of the importation of low-grade respirators from foreign sources.

The services of the staff were made available to other agencies and organizations through various committees. As a special service to industry, a series of lectures on urban air pollution was conducted.

A survey on noise and ventilation was conducted for the Department of National Defence and advice on several problems was extended to the National Research Council. A series of articles on weight-lifting in industry was written for the Industrial Health Bulletin.

The activities of the Health Radiation Section were greatly expanded during the year. Visits were made to most of the larger industries in Canada using radioactive isotopes, and close relationship established with all phases of radioactive research. In July, 1951, the Film Monitoring Service which provides a method of measuring exposure to radioactive materials, was transferred from Chalk River to this Section and many groups have made use of this service. An X-ray Laboratory is under construction where research on development of special X-ray monitoring film will be carried out. A number of radiation surveys were made in various departments, and advice given in many cases where new radioactive laboratories were being constructed.

### **Consultation Services**

The Division acted in a consultative capacity on aspects of industrial health, both in civilian and military industrial organizations. Consultant services for industrial nursing were provided for industrial nurses, management, university nursing schools, and professional nursing organizations.

Medical Officers and the senior Nursing Consultant spent a large part of their time with various aspects of Civil Defence Health Services.

### **Information Services**

Through the medium of the monthly publication, "*The Industrial Health Bulletin*", professional personnel concerned with workers' health, management, and labour groups, were kept informed about developments in the field of safety, health, general working conditions, and any new processes or material which might affect health. One issue of the Industrial Health Review was distributed. Information and technical assistance were provided for industrial and government sources on the various aspects of ventilation, lighting, toxicological and chemical hazards, and general working conditions.

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## **MENTAL HEALTH**

The new activity resulting from the introduction of the National Health Program continues to be a major factor in the mental health field and utilization of the federal grants available is increasing.

During the year 37 new projects were received from the provinces, amounting to \$810,707 and 190 continuing projects amounting to \$3,706,255 were received. This was allocated as follows: assistance in organization of mental health divisions, \$171,897; assistance to mental hospitals, \$2,100,314; assistance to psychiatric services in general hospitals, \$595,679; assistance to clinics, \$416,951; assistance to training programs, \$339,506; bursaries, \$181,225; research, \$435,965.

### **Research**

This year 40 research projects were supported under the Mental Health Grant. Through these projects, increased knowledge is being gained regarding the community aspect of mental illness, statistics, clinical aspects of psychiatric conditions and related laboratory procedures.

As a result of this assisted research, there are now a number of well-equipped research centres, such as the Munroe wing of the Regina General Hospital; the laboratories of the Allan Memorial Institute of Psychiatry, Royal Victoria Hospital, Montreal; the laboratories of the University of Western Ontario, London; and the Crease Clinic Research Unit of the University of British Columbia.

Research projects under the Mental Health Grant were reviewed by the research sub-committee of the Advisory Committee on Mental Health, which met twice during the year to consider individual projects and to review mental research in general.

### **Public Education**

In conjunction with the Information Services Division, the Mental Health Division continued an active program of public education. One new pamphlet, "Baby Talk", and a new film, "Breakdown", were produced during the year. The demand for further publications and films continued to grow, as evidenced by requests from provincial health educators, home and school organizations and by sales and distribution reports. Large quantities of the Child Training folders were distributed, in English and in French, as well as a considerable number of copies of "The Backward Child." The Child Training series of films, "Ages and Stages" continued to be used widely and a third, "The Frustrating Fours and the Fascinating Fives", was completed in this series. It will be distributed late in 1952.

The film "Breakdown" introduced a new aspect in the production of mental health films in that it was financed by the provinces under their Mental Health Grant allotments on a pro rata basis, the federal department providing funds for scripting and research.

### **Mental Health Program**

During the year a start was made in compiling information concerning the mental health programs across Canada. Basic information regarding the provincial programs having become available, a comprehensive review of these programs is being prepared.

### **Health Survey**

Mental illness and other psychiatric conditions were not covered in the National Sickness Survey, but arrangements were made to have a specific questionnaire on mental illness completed in one province. This was done and an analysis of it started. It is hoped, from this study, to gain some basic knowledge of the survey method so that selected communities may be surveyed in the future.

### **Working Party on Civil Defence**

A working party of psychiatrists, representing practitioners, administrators and educationalists, was formed to discuss the mental health aspect of the civil defence program. Following its meeting, recommendations were made to the chief of the Civil Defence Health Working Group and appropriate material was published in the department's First Aid Supplements and Civil Defence Health Services manuals.

### **Statistics**

The subcommittee on statistics of the Advisory Committee on Mental Health was active during the year and a two-day meeting was held at which discussions took place with representatives of the Dominion Bureau of Statistics.

As an outcome of these discussions, the reporting system and schedules by which mental health statistics are obtained, and the annual publication of the Bureau covering them, were reviewed and recommendations were made which should yield much more information on the incidence and other aspects of mental illness.

A medical statistician was available to the Division and a number of reports were prepared, including "Mental Illness in Canada, as reflected by Mental Hospital Admissions, 1932-47", "The Data in the Annual Report on the Mental Institutions of Canada", and "First Admissions of the Aged to Canadian Mental Institutions, 1932-49."

### **Consultant Services**

The Mental Health Division continued to provide consultant service to provincial departments of health and to other divisions of the Department, particularly to Narcotic Control, Hospital Design, Indian Health Services and Immigration Medical Services. Consultant service was also provided to the National Film Board and the Dominion Bureau of Statistics.

During the year there was increased interest, particularly in British Columbia, in the problems of narcotic addiction. In conjunction with the Department's Narcotic Division, this Division reviewed developments in the treatment program carried on by the United States Public Health Service and prepared a report on recommendations regarding the problem in British Columbia.

### **Advisory Committee**

While the full Advisory Committee on Mental Health did not meet this year, it was kept active by correspondence and other contact between members, and two of its subcommittees, those on Statistics and Research, were most active.

### **Professional Information**

During the year a booklet on "Community Mental Health Services in Canada" was prepared and distributed to professional personnel.

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## **NUTRITION**

The Nutrition Division provides special technical services, in co-operation with a number of other Divisions of the Department, directed generally toward the maintenance of health and working efficiency of Canadians, and designed specifically to assist provincial programs. In addition there are international functions related to the World Health Organization, the Food and Agriculture Organization and the Commonwealth Program for Technical Assistance in Asia. Contact is also maintained with nutrition workers and organizations in several countries.

### **Federal Health Grants**

Financial assistance has continued under the General Public Health Grants for the maintenance and extension of nutrition services in Ontario, Nova Scotia, and Saskatchewan. Public Health Research Grants for various kinds of problems contributing to nutritional knowledge have been continued in most universities.

**Research**—In addition to research under the federal grants there are several projects carried out by the department, usually as a cooperative effort of several divisions, working with provincial and local personnel.

New research during 1951-52 included a nutrition survey in one area of Manitoba, and food calculations of various kinds. Several projects continued from previous years included: (a) the blindness study (b) four different feeding projects in Indian Residential Schools. During 1951 the optic atrophy study completed the plotting of seven generations including 1,430 living persons, distributed among 370 families. Fifty of these families were visited, while laboratory and clinical studies were made on 70 selected individuals. The medical social worker was on loan part of the time to organize the survey of social workers in the Province of Quebec.

The feeding projects are beginning to show some results. In one school where alternate pupils received vitamin C tablets and placebos it was found that blood levels differed, but no other aspect of general health or of gingivitis seemed to be altered. In a school using flour "enriched" with vitamins, iron and bone meal, anemia developed and may be the result of interference by bone meal in the absorption of iron. In another project the health value of skim milk powder is being further studied.

Research in the Experimental Kitchen has proceeded along three lines. For Civil Defence purposes some 27 canned and packaged foods commonly found in households and suitable for an emergency stock of food have been studied as to keeping qualities. Some were beginning to deteriorate at the end of 12 months. Work on civil defence manuals has also been done. For small hospitals, where a consultation service is provided to provincial governments building under health grants, series of recipes have been developed both for moderate cost and for nutritional improvement (high protein diets). Bread of various kinds is being baked regularly for a project of the Food and Drug Divisions. Ten hospitals and eight cafeterias in public buildings were given advice on food service.

**Information and Education Service.**—No new materials were produced during 1951-52. Funds and energies were directed toward revising and reprinting materials previously issued. Work was started, however, on a new film on nutrition, and also on a new poster. The second edition of a "Table of Food Values Recommended For Use in Canada" was received and placed on sale by the Queen's Printer. This Division also carried out consultative duties for the Nutrition Divisions of both F.A.O. and W.H.O.

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## PUBLIC HEALTH EDUCATION

By the very nature of their responsibilities, many of the Department's services were active in the field of health education, continuing this year to assist the provinces in such work and to provide them with informational materials. These efforts were co-ordinated through the Information Services Division, as detailed in the review of that Division's activities in the Administration Branch section of this Report.

The Department continued its active general health education work, issuing material in all media and supplementing, with displays, leaflets, etc., programs initiated by provincial, municipal, professional and voluntary health organizations.

Federal and provincial health educators correlated their programs by frequent correspondence and met to discuss their joint effort on occasion of the annual meeting of the Canadian Public Health Association.

Divisions particularly active this year in informational work included Food and Drugs, Dental Health, Mental Health, Child and Maternal Health and Nutrition. Considerable valuable health material was produced by the Health Planning Group, under the Department's new responsibilities in the field of Civil Defence. This included the issue of manuals on such subjects as Basic First Aid, Home Nursing and disaster health services generally.

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## **PUBLIC HEALTH LABORATORY SERVICES**

Under the impetus of increasing demands from the provinces for assistance the work of the Laboratory of Hygiene continued to expand. Collaborative efforts with universities in research fields of mutual interest also were extended, particularly in the fields of biochemistry and immunology. The study of oral methods of immunization of children was enlarged and several of the provinces are actively co-operating in large-scale human trials.

The biochemical laboratory established at the Ottawa Civic Hospital is demonstrating its value and a start has been made in methods of surveying the accuracy of certain biochemical diagnostic procedures carried out by hospitals. In particular a survey of the performance of blood sugar determinations for the diagnosis of diabetes is being carried out in one province.

Five of the provinces have requested that the staff of the Laboratory of Hygiene undertake a survey of their public health and hospital laboratory services.

## **SECTION OF VIRUS DISEASES**

The major activities of the Virus Section during this year were partly concerned with laboratory investigations of several epidemics of viral origin in Canada, and partly with the diagnostic service on human virus diseases, which was provided to the Provincial Laboratories of Health, the Department of Veterans Affairs and to various hospitals and institutions. Further activities were related to studies in old age groups of the human population on the immune response and protection after vaccination with polyvalent influenza vaccines.

Research work was successfully carried out on the development and standardization of stable non-infective reagents for the laboratory diagnosis of virus diseases, and research has been continued on neurotropic viruses, with particular emphasis on strains of poliomyelitis and related viruses. This work was greatly facilitated through the aid of the Rockefeller Foundation, New York, who made the services of one of their medically-qualified virus experts, Dr. S. F. Kitchen, available.

A training course in laboratory procedures for the diagnosis of virus diseases in man was given to senior personnel of the Laboratory Divisions of the Provincial Departments of Health in May, 1951.

### *Investigation of Virus Epidemics*

During January, 1951, an influenza epidemic made its appearance in Canada with large numbers of cases reported from all provinces. The Virus Section, in close co-operation with the Provincial Departments of Health, carried out the laboratory investigation of the epidemic.

Virus isolation attempts were carried out on throat washings and were successful in 60 per cent of a total of 60 samples. The virus strains were identified as A primes and were found to be identical. They were closely related to the A-prime strains isolated in Sweden in 1950 and in England early in 1951. Two hundred paired sera of infected individuals were tested during this epidemic and a significant increase in antibody titre was demonstrated in 82 per cent of these specimens. Comparison of the results obtained with the individual serological tests indicated that the complement fixation test was the most efficient diagnostic procedure, showing a significant antibody increase in about 77 per cent of the cases, whereas with the haemagglutination-inhibition test, an increase of antibodies could be shown in only 71 per cent of the cases. The antibody response in the infected individuals confirmed the results obtained with the virus isolation attempts.

During the summer months of 1951, the Virus Section carried out a collaborative study with several hospitals in Montreal and Ottawa on clinical cases of non-paralytic poliomyelitis. One hundred and twenty-four cases were investigated and serological tests performed in the Virus Section revealed that in seventeen cases, an infection with mumps virus was responsible for the patients' neurological symptoms.

### *Investigation of Immunological Response to Influenza Vaccines in Old Age Groups*

In the latter part of 1951 and early in 1952, an investigation was carried out in collaboration with the Division of Epidemiology of this department on the immunological response to polyvalent influenza vaccines in older age groups of the human population. The experience in the past year has shown that the mortality rate caused by virus influenza was highest in individuals over fifty years of age. Protection by immunization was, therefore, studied in older age groups. Several homes for the aged in Ottawa were chosen for this work and individuals were immunized with a polyvalent influenza vaccine. Sera were collected from these cases before and three weeks after vaccination. About 730 samples of serum were received and 3,100 serological tests were carried out in the course of this investigation. These studies have not yet been concluded but will be summarized in next year's Annual Report.

### *Diagnostic Services for Virus Diseases*

The serodiagnostic service, which was established in 1950 in close collaboration with the Provincial Laboratories of Health, has been expanded considerably during the past two years and the number of specimens received from the provinces has been doubled during 1951 as compared with the previous year.

### *Training Course in Laboratory Diagnosis of Virus Diseases*

In May, 1951, a training course in laboratory diagnostic procedures on virus diseases in man was given to senior personnel of the Laboratory Divisions of the ten Provincial Departments of Health. Particular emphasis was given to the serodiagnosis of pneumo-, dermo- and neurotropic viruses. Methods of virus isolation were also demonstrated.

Following the course, the Virus Section prepared and distributed to the Provincial Laboratories standardized non-infective antigens and immune sera for the diagnosis of Influenza A and B, mumps and Newcastle disease.

#### *Information and Strain Typing Centre for Influenza*

In January, 1951, a Canadian Influenza Information and Strain Typing Centre was established at the Laboratory of Hygiene and an advisory committee on influenza was formed including representatives of the Departments of National Health and Welfare and Agriculture, of the combined Canadian Armed Forces and the universities of Montreal and Toronto. In April the Director General of the World Health Organization designated the Laboratory of Hygiene as a WHO Influenza Centre. Since then the Influenza Centre has remained in constant communication with WHO, Geneva, and the Influenza Centres in London and Washington, frequently exchanging detailed scientific information on influenza virus strains isolated in current epidemics.

#### *New Virus Laboratory*

As facilities of the present quarters of the Virus Section have been inadequate the necessity of providing a new Virus Research building was reviewed and the Department was given approval to proceed with the necessary planning for a modern laboratory building at Tunney's Pasture in the West End of Ottawa.

Plans include special equipment and air conditioning to ensure the safety of the personnel working in the building. An effective airlock system has been planned to isolate the "contaminated" areas from the clean areas, with decontamination features to eliminate the danger of carrying infective materials beyond the isolated area. The new building will provide facilities to investigate virus diseases, such as Queensland fever, typhus, Rocky Mountain spotted fever, poliomyelitis and similar neurotropic virus diseases, too dangerous to be handled in an average laboratory environment.

### **SECTION OF BIOLOGICS CONTROL**

The Biologics Control Section was formed as the result of a re-organization within the Laboratory of Hygiene. This had the effect of consolidating all the work carried out under the authority of the Food and Drugs Act, for which the Laboratory of Hygiene acts in a technical and advisory capacity to the Chief Dominion Analyst and, as well, facilitated the more efficient handling of problems related to immunological research and studies on antibiotics in which the laboratory is engaged. This section is divided into four Sub-Sections.

#### *(a) Biologics Control*

The routine testing for potency, safety and sterility of biological drugs (vaccines, toxoids, antitoxins, etc.) was carried out as usual. Biological assays for diphtheria and tetanus toxoids were carried out at capacity.

Control testing of B.C.G. Vaccine was continued. Products from manufacturers are checked routinely for freedom from extraneous bacteria, total count of B.C.G. organisms, safety and tuberculogenic qualities.

An attempt is being made to perform more tests for safety, pyrogen and sterility on parenteral preparations not subject to licence. Lists of parenteral materials are obtained from the Inspection and Labelling Services, Food and Drug Laboratories, and samples are selected at random for test purposes. In this manner, it is hoped to eventually cover all manufacturers distributing parenteral materials in Canada.

Pyrogen tests of transfusion sets, intravenous solutions and distilled water, were routinely carried out for the various blood banks and the Canadian Red Cross Blood Donor Service.

Inspections of Canadian and United States biologic manufacturers' establishments were carried out as usual. The Department has been receiving an increasing number of requests for Canadian biologic licences, the majority of new requests being for antibiotics, liver extract (injectable) and A.C.T.H., all of whose establishments are inspected before a licence can be granted.

#### (b) *Immunology*

Immunization studies in humans were continued. The studies on methods and materials for the immunization of infants, which were started in 1946 in collaboration with McGill University and the Child Health Association of Montreal, were completed. An article on "The Effect of Inherited Antibodies on the Immunization of Infants" was published in the December, 1951, issue of the *Journal of Pediatrics*. The results show that (1) it is not only possible but desirable to immunize infants beginning at three and four months of age; (2) it is advantageous to mix several antigens, i.e., diphtheria, tetanus and pertussis, for simultaneous injection; and (3) inherited antibodies present in the sera of infants under six months of age do not interfere with subsequent immunization against diphtheria, providing a highly-potent diphtheria toxoid is used. Studies are now being planned to determine the effect of varying the dosage of diphtheria and tetanus toxoids in immunization programs for infants.

The studies on oral immunization against diphtheria and tetanus (lockjaw) were continued. The results obtained on trial groups at McGill University were highly encouraging. The studies were, therefore, expanded to include large groups in Victoria, Vancouver and Winnipeg. The latter studies are in collaboration with the provincial and local public health authorities in the localities concerned. Other studies, using smaller groups, were started in order to determine the pattern of oral immunization. The Ontario Veterinary College is participating in the latter phase of this work.

Approximately 1,500 humans are taking part in this study, varying in age from primary school to adulthood. This represents an extremely large experiment since at least two blood samples are obtained from every subject on test and, in some instances, five or six specimens are needed. The antitoxin levels for diphtheria and tetanus are determined in each serum and as a further control, whooping cough agglutinin titrations are performed in an attempt to show that no non-specific rise has occurred. This is possible since there are no whooping cough antigens in the oral preparations.

Experimental work on *H. pertussis* vaccine was continued and extended. The Laboratory of Hygiene's method for the quantitative estimation of *H. pertussis* agglutinins was published in the *Journal of Clinical Pathology*, November, 1951.

Studies were started on anaerobic organisms. Particular attention is to be paid to the botulinus group in which it is planned to investigate toxin-toxoid production and the feasibility of immunization by oral and parenteral means. This is a continuation of work that was started several years ago and which has been held in abeyance for the last two years.

#### (c) *Chemistry and Pharmacology*

Fundamental research on the mode of action of penicillin was continued. Nucleotides from yeast nucleic acid were separated and purified by column chromatography and a preliminary study of the utilization of these compounds

by *Staphylococcus aureus* was completed. A paper detailing this work "The Oxygen Uptake by *Staphylococcus Aureus* and its Inhibition by Penicillin" was presented at the Annual Meeting of the Society of American Bacteriologists in May, 1951.

A brochure on the chemical tests employed at the Laboratory of Hygiene, "The Chemical Estimation of the Potency of Antibiotics", was prepared and is now available for distribution.

Studies have been started on antibiotic inhibitors. Bacterial strains have been found which produce a Chloromycetin reductase, thus confirming at least one report in the literature and, in addition, crude soybean phosphatides have been fractionated in an attempt to determine whether this material contains the controversial Streptomycin inhibitor.

Phenol co-efficients are being routinely performed. Special studies have been conducted on methods for assaying disinfectants and on the efficiency of aerosols. Techniques have been developed for the determination of phosphorus, calcium and nitrogen and a micro-Kjeldahl method for nitrogen has been established.

#### *(d) Antibiotics and Disinfectants*

Routine testing of antibiotics for potency, sterility, safety and pyrogens was continued. Research on "The Effect of Combinations of Antibiotics in vivo and in vitro" was carried out and a scientific article pertaining to it was published in the Journal of Laboratory and Clinical Medicine. Constant research is being conducted in assay methods for the newer types of antibiotics.

Studies on the stability of Penicillin, Streptomycin, etc., are continuing. It is expected that, as a result of these experiments, a change will be made in the Regulations in the Food and Drugs Act regarding expiration times of a number of antibiotics.

### SECTION OF BACTERIOLOGY

This section was formerly the "Bacteriology and Immunology Section", but during the year, as a result of reorganization in the Laboratory of Hygiene, this section was separated into its two main components—"Bacteriology" and "Immunology"—and the Immunology Section was combined with the Antibiotics Section to form the new "Biologics Control" Section.

All pre-existing services and responsibilities of the Section were maintained and some new ones added. For some time now it has been the hope that the Laboratory could take some active part in a study of hospital bacteriology, a phase of medical care which has been neglected. The Laboratory was fortunate in acquiring, during the year, the services of a well-qualified medical bacteriologist, to investigate this important problem. During September he was assigned to the bacteriology laboratory of the Ottawa Civic Hospital, where he could study the problem at first hand. During the six months that he has been there considerable assistance has been rendered not only to the director of the laboratories but also to the medical staff of the hospital. With the knowledge gained at this hospital it is hoped that similar assistance in this field can be given to other hospitals in the country at large and a program developed for the general improvement of hospital laboratory procedure.

## Enteric Bacteriology

In this—the major field of activity in the section—the following phases of work were continued:

### (1) *The operation and maintenance of the National Salmonella Typing and Reference Centre:*

A total of 472 cultures were received for identification from eight of the provincial laboratories, D.V.A. hospitals and other sources. This was nine more than last year, but only 355 were members of the *Salmonella* genus (49 fewer than last year). Twenty-eight different types of *Salmonella* were identified and, as found in previous years, the commonest types were *S. typhimurium*, *S. paratyphi B*, *S. typhi*, *S. oranienburg* and *S. newport*. No new types were discovered during the year. *Salmonella montreal*, described as a new type by this Laboratory last year, has been replaced by *Salmonella wien* since the latter name was deemed by the International Committee on Nomenclature to hold priority. Details of the individual types, and of their epidemiologic and clinical significance, were reported in full to the Technical Advisory Committee on Public Health Laboratory Services at its annual meeting in Ottawa in December.

There was an outbreak of paratyphoid fever in a fishing camp of about 110 persons at Gros Cap, N.W.T., in August, involving some 14 persons. The Department was asked to co-operate in the investigation of this outbreak and the laboratory received 211 stool specimens for bacteriological examination. *S. paratyphi B* was isolated from the stools of five of these cases. A new technique for stool collection ("Blotting paper technique" of L. K. Joe) was carried out in parallel with the usual glycerol-saline method. The new method, which is simple and cheap, compared very favourably with the accepted method.

Last year this Department investigated an outbreak of paratyphoid B infection at Fort Smith, Alberta. There was some evidence that a carrier or carriers from this earlier outbreak caused the outbreak at Gros Cap. Thirteen cultures from the Fort Smith outbreak proved to be of the same phage-type as that of the Gros Cap Strain, viz. phage-type 1. The usefulness of *Salmonella* typing is well demonstrated in these outbreaks, for proper laboratory follow-up cultures on the Fort Smith carriers might have prevented the Gros Cap outbreak.

### (2) *The establishment of the National Shigella Typing and Reference Centre:*

In last year's report the hope was expressed that this Centre might be able to offer a complete *Shigella* (dysentery bacilli) typing service to the provinces similar to the *Salmonella* typing service. The Laboratory was able to offer this service to the provinces at the annual meeting of the laboratory directors in December. Grateful acknowledgement is made of the assistance given in establishing this service by Dr. W. H. Ewing of the U.S.P.H.S., Chamblee, Georgia. Seventy cultures of *Shigellae* and two of *Alkalescens-Dispar* group received at the laboratory were successfully typed. *Shigella sonnei* was the commonest type found.

### (3) *The preparation and distribution of standardized antigens:*

The demand by the provinces for standard antigens increased again during the year. During this year a total of 276,765 ml. of standard antigens were supplied, almost 74 litres more than were distributed during 1950-51. All the

provinces, with the exception of Ontario, are now using the Laboratory's antigens. There is a constant increase in the demand for the glycerolated Vi antigen used in the detection of the typhoid carrier state.

*(4) The preparation and distribution of diagnostic antisera:*

To assist in the rapid identification of enteric pathogens at the provincial level, the Laboratory continued to supply *Salmonella* polyvalent and grouping sera. The laboratory directors requested that it also prepare for them diagnostic sera for identification of the common types of *Salmonella*. This was done and the Laboratory is now distributing 8 diagnostic H sera which allows the provincial workers to identify all the types most commonly found in Canada. In addition, the Laboratory is now also supplying polyvalent *Shigella* antisera. As a result, this year 724 ml. of diagnostic antisera were distributed, almost twice as much as in 1950-51.

*(5) Special Problems:*

Methods of standardization in testing the agglutinability of *Salmonella* antigens have been improved. Research is presently being carried out on preservatives used in the lyophilization of standard antisera. Preliminary observations indicate that a preservative is required in order to maintain the level of agglutinins in the dried antisera.

## **Food and Sanitary Bacteriology**

The Foods and Sanitation Subsection has provided control services to the Food and Drug and Public Health Engineering Divisions, and has conducted a number of bacteriological surveys and research projects. The activities conducted in this rather diversified field are summarized below.

*(1) Bacteriological Control of Shellfish-Producing Areas in the Eastern Maritime Provinces:*

Control of shellfish producing areas is largely a co-operative effort on the part of the Laboratory of Hygiene and the Division of Public Health Engineering of the Department and the Department of Fisheries. The new Mobile Laboratory carried out a routine bacteriological survey program recommended by the Interdepartmental Shellfish Committee; ten surveys in Prince Edward Island and Nova Scotia were completed during the year. A total of 2,655 water samples and 19 oyster samples were analysed in the course of three surveys.

*(2) Shellfish Toxicity Control:*

The 1950-51 scheme for the routine control of toxicity in clams and mussels was again followed in 1951-52, and provided effective control. A total of 294 shellfish extracts from New Brunswick, Nova Scotia, Newfoundland, and Quebec were received during the year for toxicity testing; the toxicity levels were, in general, very low and thus permitted a greater use of the producing beds. One hundred and thirty-two specimens of canned clams were received from packers in New Brunswick; in all cases these packs proved to be non-toxic.

*(3) Bacteriological Control of American Imported Shucked Oysters:*

A bacteriological survey of shucked market oysters imported from the United States was continued. During a research study conducted in Montreal during November, 288 specimens of shucked American oysters were analyzed; in addition, three replicate samples from each of 80 specimens of oysters from the

Montreal market were examined at the Laboratory of Hygiene. Data obtained from these tests indicate that the bacteriological standards for the grading and acceptance of shucked oysters, tentatively adopted last year, are quite satisfactory.

(4) *The Bacteriological Examination:*

The bacteriological examination of pharmaceutical gelatin and agar-agar for the Food and Drug Divisions was continued. Ninety-one water samples were examined bacteriologically for the Public Health Engineering Division. One hundred and twenty-two water samples were tested for other agencies.

(5) *Milk Survey, Prince Edward Island:*

One of the important functions that this laboratory can perform for the provinces is a mobile laboratory service for the surveying of milk and water supplies, restaurant sanitation, etc. A comprehensive survey of raw and pasteurized milk supplies on Prince Edward Island was conducted in co-operation with the provincial Department of Health and Welfare; 680 samples of milk and 65 milk utensils were examined bacteriologically during the survey. The resulting data indicates that a very marked improvement in the sanitary quality of milk supplies on P.E.I. had taken place since the first co-operative survey was made in 1946.

(6) *Restaurant Surveys:*

In response to a request from Prince Edward Island, a survey was conducted during the Spring of bacteriological and sanitary conditions in the restaurants throughout the province. Five hundred and eighty utensils used in the serving and preparation of foods in all 48 restaurants that were open at the time of the survey, together with 58 samples of dishwater and drinking water from these same establishments, were examined bacteriologically.

A preliminary survey of the bacteriological and sanitary conditions in Government building cafeterias in Ottawa was conducted during February and March. One hundred and fifty-four utensils used in the serving and preparation of food in six establishments were examined bacteriologically.

(7) *Identification of Meat by the Precipitin Test:*

Considerable interest in the detection of the illegal sale of horsemeat labelled as beef has been maintained in 1951-52. As a result, 380 specimens of suspected meats have been submitted by the Food and Drug Divisions and various municipal agencies for identification; 42 specimens (11 per cent) of the submitted samples, contained horsemeat in contravention of the Food and Drugs Act. As a result of these tests and the evidence of its technical staff, the Department was successful in prosecuting a number of vendors for the illegal sale of horsemeat.

During the year considerable amounts of antisera for the specific detection of horsemeat, beef, and other meats were prepared in this laboratory. It has been possible to supply a number of interested laboratories with small amounts of antisera upon request.

Numerous methods for the extraction of antigen were investigated; in all cases they proved to be too slow and cumbersome for the processing of large numbers of specimens for routine identification. An improved method which allows for easy extraction of the antigen and rapid completion of the precipitin test has been developed; it is now possible to obtain a completed test within one hour, compared to a minimum of 24 hours using the involved procedures previously recommended.

### (8) *Freeze-drying of Biological Material:*

The Edwards Freeze-Drier has been operated almost continually for the lyophilization of bacterial cultures, antigens, and other biological materials; 15,769 ampoules were processed during the year.

### **Hemolytic Streptococcus and *C. Diphtheriae***

The Laboratory continued its "typing service" of hemolytic streptococci and diphtheria bacilli to the provinces. 626 ml. of Lancefield grouping sera (rabbit) for hemolytic streptococci were distributed during the year. This was 200 ml. more than during 1950-51. Collaboration with the Sick Children's Hospital, Toronto, in a study of rheumatic heart disease was continued and 302 sera (from 66 patients) were tested for streptolysin O antibodies (ASO).

A comparison of Elek's medium and of Frobisher's modification of it for the in-vitro virulence testing of cultures of *C. diphtheriae* was continued. The two media compared favourably but the tests were sharper and easier to read on the Elek medium. This test would have a very real usefulness in the public health or hospital laboratory if dehydrated media and reagents were readily available. Difco has been attempting to prepare such reagents and the laboratory has been co-operating with them in testing their different experimental lots. So far, no satisfactory "dried" product has yet been prepared but it is hoped that the project will be continued.

### **Non-specific Urethritis**

The R.C.A.F. (Rockcliffe) asked assistance in investigating cases of non-specific urethritis. Bacteriological studies were restricted to the search for pleuropneumonia-like organisms (PPLO) and gonococci.

### **Parasitology**

The Laboratory seeks to give assistance to the provinces in this field of work, by supplying antigens for diagnostic purposes, by examining and reporting on "difficult" specimens, and by the provision of specially prepared slides of interesting parasitological material for teaching and instructive purposes. There were 87 requests for antigens, from the provincial laboratories and D.V.A. One hundred and two human fecal samples were submitted from the provincial laboratories, D.V.A. laboratories, Armed Services and local hospital laboratories for critical diagnosis. A number of *E. histolytica* cases were isolated along with a variety of Helminth ova and adult worms. Trichinosis studies have been continued and a paper "Prevalence of Human Trichinosis in Canada" is now being prepared for publication. From the western branch of the Laboratory, Kamloops, 57 specimens of human diaphragm material were forwarded for investigation and four positive specimens (for *Trichinella*) were identified. The investigation of *Trichina* in wild rodents was concluded with the examination of over 2,000 animals and a paper "A Survey of the Incidence of Trichinosis in Rats in B.C." is now in press.

A number of pressing parasitological problems await investigation. Trichinosis in humans, hydatid cyst and the internal parasites affecting man in northern Canada, evaluation studies of parasitological performance in provincial laboratories (requested by the laboratory directors at their last annual meeting), the danger of army personnel returning from Korea in spreading parasitic diseases so common in that part of the world, are examples of problems that need to be investigated.

## SECTION OF SEROLOGY AND CLINICAL CHEMISTRY

The preparation and distribution of standard reagents (antigens, complement, hemolysin) to Provincial Public Health Laboratories have been continued in an effort to ensure Dominion-wide uniformity in the blood tests for syphilis.

In order to determine the effectiveness of the program serological evaluation studies are conducted every second year. The results of the fifth study have been compiled and analysed and summaries have been sent to the participating laboratories.

During the past year the Section participated in an international exchange of blood specimens. When the results have been summarized at Geneva it will be possible to gain some idea of the efficiencies of blood tests for syphilis in Canada on the basis of results obtained in other countries.

As a part of the research program of this division studies are being conducted in collaboration with the Banting Institute, University of Toronto, in an effort to develop a synthetic antigen for the diagnosis of syphilis. It is felt that a synthetic antigen would be more uniform from batch to batch than the present antigens which are extracted from animal tissue. Another project has been the clinical evaluation of certain cardiolipin antigens used in the Kolmer-Wassermann test. This work was summarized in a paper presented at the annual meeting of the Canadian Public Health Association and will be published shortly.

Research in clinical chemistry has been continued in the branch laboratory located in the Ottawa Civic Hospital. Emphasis has been placed upon the evaluation of some of the clinical procedures which are used more commonly in hospital laboratories. Quantitative methods for the determination of glucose, non-protein nitrogen, creatinine, sodium, potassium and chlorides in the blood have been investigated. The various tests used in the qualitative examination of urine specimens have been studied intensively.

With the help of the director of one of the Provincial Public Health Laboratories, arrangements have been made to evaluate the accuracy of blood glucose determinations as carried out in the hospital laboratories of that province.

## WESTERN BRANCH, KAMLOOPS, B.C.

This laboratory operates as an adjuvant to the various health services of the Dominion. Special diagnostic services, for which the laboratory is equipped, are available to other laboratories and certain diagnostic antigens are prepared and supplied gratis to provincial and D.V.A. laboratories as requested.

During the year 492 biological and serological tests were carried out, and 105,050 cc. of standardized antigens were supplied—sufficient to carry out some 33,000 diagnostic tests.

The survey initiated last year in co-operation with Indian Health Services to determine the incidence of tularemia in western Indians was continued and during the year serological tests were carried out on 362 patients. Of these, 14 gave reactions highly suggestive of *P. tularensis* infection.

Investigations relating to tick-, insect- and rodent-borne diseases have been pursued in co-operation with the Provincial Departments of Health of British Columbia, Alberta and Saskatchewan, and attempts made to locate foci of infection from which control measures could be directed. The field, or specimen collecting, crews were provided by the provinces and each crew's activity was directed by its respective health department.

In Alberta and Saskatchewan the ordinarily short collecting season was made still shorter by the unusually heavy rains of 1951 and the number of specimens collected was somewhat less than in previous years. In December, the British Columbia Health Department discontinued the year-round rodent survey previously carried on and arranged instead that the City of Vancouver make only periodic surveys of certain areas. This led to a further reduction in the number of routine specimens being submitted to the laboratory. However, just under 14,000 specimens were collected, including 83 trapped and shipped to the laboratory alive for special studies relating to leptospirosis.

The examination of specimens for plague (*Pasteurella pestis*) and for Rocky Mountain spotted fever gave entirely negative results. One specimen of wood ticks (*Dermacentor andersoni*) submitted from south of Shaunavon, Sask., proved positive for *P. tularensis*, indicating that cases of tularemia might occur in that area.

Cursory taxonomic examinations were made of the ectoparasites submitted from the rodents collected in the coastal region of British Columbia and records were kept of the species of flea encountered with a view to recording the distribution of *Xenopsylla cheopis*, the classical plague vector. The total rat flea count for the year was low. In British Columbia it was approximately one flea to every three rats. In Saskatchewan the index was nil; no fleas having been submitted from the 71 rats taken in that province.

The study initiated a few years ago in connection with leptospirosis was continued as opportunity afforded. Eighty-three live rats submitted from various points in British Columbia were examined for evidence of this infection, in addition to the usual tests for plague. Leptospirae were recovered from one of this group. The leptospirae found in this instance proved, on microscopical appearance and on virulence tests—as did those isolated during the previous year—to be similar to the classical rat strain, *L. icterohemorrhagiae*, but, on serological tests they differed from the stock strains maintained in the laboratory. In view of this observation, subcultures were submitted for identification to the Army Medical Center, Washington, D.C. There, it was found that these strains were identical with *L. ballum* strains—a new serological type isolated in Denmark in 1944 and later recovered from human cases of leptospirosis in Cuba, but, hitherto not found on this continent. Studies on the organism are being continued and a paper recording the findings is in the course of preparation.

In the past, rat bite fever infection (*Spirillum minus*) had been encountered repeatedly in commensal rats in British Columbia. Of the 96 rat tissue pools (295 rats) examined this year for evidence of plague, none were found infected with *Sp. minus* but, of the 83 live rodents, 12 (14.5 per cent) proved positive—a striking example of the mortality of the infectious agent in dead tissues.

Of academic interest in the examination of rodents for plague was the rather high percentage of cysticerci and capillaria infestations encountered, (*Taenia fasciolaris*—the larval form of the cat tapeworm *Taenia taeniaeformis*, and *Capillaria hepatica*). Of the 378 rats examined during the year 121 (32 per cent) harbored cysticerci—from 1 to 6 per animal, an average of 1.6—and 21 (5.5 per cent) showed masses of capillaria ova in the livers.

#### TECHNICAL ADVISORY COMMITTEE ON PUBLIC HEALTH LABORATORY SERVICES

The seventh annual meeting of this committee was held in Ottawa in December 1951. The directors of all the provincial laboratories were present and two members representing the Departments of Veterans Affairs and

National Defence. Dr. E. B. Schoenbach, Professor of Medicine, State University of New York, and director of Medical Services, Maimonides Hospital of Brooklyn, New York, was a special guest. The business of the first day was devoted almost wholly to a discussion of "Antibiotics". Dr. Schoenbach delivered an address in the morning at the Ottawa Civic Hospital on the "Clinical Use and Misuse of Antibiotics" to a joint meeting of the Technical Advisory Committee and the medical staff of the Civic Hospital. In the afternoon he gave a lecture on the "Laboratory Aspects of Antibiotics" to the committee and took part in a lengthy discussion on the methods of testing the sensitivity of microorganisms to antibiotics and the relationship of laboratory to clinical results.

Rh testing of blood was discussed and a resolution recommending that the local blood transfusion services should be considered as the agencies best suited to deal with the laboratory problems involved in the testing of blood.

The Committee appointed a special sub-committee to study the costs of laboratory services and recommended that any national scheme for furnishing free laboratory services should be held in abeyance until this special sub-committee had completed its investigation and its report had been studied.

Special reports were submitted by the Registrar of the Tumour Registry and by the officers-in-charge of the sections of bacteriology, syphilis serology and clinical laboratory services, and of virus research, on the activities of their respective sections. It was agreed that another syphilis serology evaluation survey should be carried out in 1952 and that the Laboratory of Hygiene should also conduct a special evaluation study of the methods used and the proficiency of the staff in the provincial laboratories in detecting *E. histolytica* in stools.

The Committee approved the Laboratory of Hygiene as the National Shigella Reference and Typing Centre. The Laboratory of Hygiene was requested to organize three refresher training courses for laboratory personnel during the coming year—Enteric Bacteriology, Mycology and Syphilis Serology. In addition, discrepancies between Kahn and Complement Fixation tests, the training of laboratory technicians, echinococcus (hydatid) infection in B.C., the classification of laboratory workers, the presence of tubercle bacilli in sputum (as shown by culture) in the absence of clinical tuberculosis, virus studies at the provincial level, laboratory-acquired infections, and the laboratory in civil defence, were among the more important topics discussed at the meeting.

## CANADIAN TUMOUR REGISTRY

In the period between the April 1, 1951 and March 31, 1952, 205 tumours were registered. These were contributed by 36 pathologists throughout Canada.

During the past year 73 tumours have been reported on by the Registry's Consultants, whose invaluable services are acknowledged.

Requests for "follow-up" information on 344 cases have been sent out and 231 replies have been received.

A study set of female genital tract tumours has been prepared consisting of 56 slides. It is not comprehensive but an attempt has been made to present the majority of the commoner, and a number of the rarer, gynecological tumours. As time goes on cases will be added to the set. Accompanying each set is a loose-leaf book of case protocols. Each protocol includes a synopsis of the clinical history, and a note on the gross and microscopical pathology. When indicated, a paragraph headed "Comment" has been added, covering points of special interest. Follow-up information will be added to the case reports

from time to time. A study set has been sent to the Professors of Pathology at each of the Canadian universities on an indefinite loan. A letter has been sent to members of the Canadian Association of Pathologists informing them that these loan sets are available on request.

The preparation of study sets of dermal tumours and tumours of bones and joints is now under way and other sets will follow.

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## **PUBLIC HEALTH RESEARCH**

Scientific and technical research, inherent in its service programs, continued this year as an important part of the Department's activities. Detail of such work is contained in this Report in sections dealing with Public Health Laboratory Services, the Food and Drug Divisions, Industrial Health, and with such divisions as Nutrition, Dental Health, Epidemiology, etc.

The National Health Program, as indicated in reports of the various fields supported by grants under the Program, contributed to research projects all over Canada.

Research in the socio-economic field went forward at an accelerated rate on many projects. These are carried out mainly by the Research Division, whose activities are reflected throughout this Report, as well as in the summary of this Division's work in the section dealing with the Administration Branch.

Research in hospital and medical care insurance programs were carried out in the Health Insurance Studies Division, and are reported in the section of this Report on Surveys and Planning.

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## **SURVEYS AND PLANNING**

### **CANADIAN SICKNESS SURVEY**

Results began to be apparent during the year from the nation-wide sickness survey, begun in the autumn of 1950 and designed to make a general assessment of the amount and nature of illness in Canada. This sampling study, closely associated with the provincial health surveys, and carried out with the assistance of the National Health Program, aimed at determining the health needs of Canadians more accurately than had been possible previously.

The planning and tabulation of these results is being carried forward jointly by the Epidemiology and Research Divisions and the Directorate of Health Insurance Studies, in collaboration with the Dominion Bureau of Statistics, and the desired picture of actual conditions is gradually being built up.

As a result of the Sickness Survey an unparalleled set of records of individuals' illnesses has become available and it is expected that findings arising from them, when tabulation and analysis is completed some time in the Fall of 1952, will contribute in great measure to the development of services to provide even better health care for Canadians.

## NATIONAL HEALTH SURVEY

Seven provinces have completed surveys of their health facilities and services in accordance with a plan to make an overall appraisal of needs to serve as a guide in future development of health programs. These surveys were in fulfilment of a basic purpose of the National Health Grant Program, which financed them.

Using the surveys received from the provinces, the Department's Research Division began work towards the end of the year on the compilation of a comprehensive nation-wide report on personnel, health services and hospital facilities in Canada, to be known as the "National Health Survey Report". In this connection, studies were under way on mental health services, tuberculosis control, cancer control, dental health services, laboratory services and local health services, as well as on personnel and hospital facilities generally.

Conditions under which Grants were provided for this survey in the National Health Program and the fields to be studied by the provinces were detailed in the Annual Report of the Department for the fiscal year ended March 31, 1951.

It was apparent, by the end of this fiscal year, that these provincial health surveys would make possible the compilation of the first detailed overall assessment of Canada's health facilities and services.

## HEALTH INSURANCE STUDIES

Departmental studies of prepaid hospital and medical care programs are the responsibility of the Directorate of Health Insurance Studies, with the assistance of the Research Division. During the year, the Director of Health Insurance Studies visited a number of countries to observe the operation of their programs. The Research Division undertook publication of a series of bulletins on health insurance in selected countries. "Health Insurance in Sweden" was printed and earlier bulletins on programs in Denmark and New Zealand were revised. Draft bulletins were also prepared on Health Insurance in Norway, the Netherlands and Great Britain (1911-1948). The Director of Health Insurance Studies also participated in the meeting of the Select Committee on Public Health Administration of the World Health Organization.

Officers of the Department have kept in close touch with health care developments in the United States, through personal visits and membership on the subcommittee on Medical Care of the American Public Health Association. In addition, close attention has been paid to the work of the Health Insurance Plan of Greater New York.

The Department has also compiled information concerning a number of health care programs in different provinces of Canada. Hospital insurance plans in British Columbia and Saskatchewan, medical and hospital care in the Cottage Hospital districts of Newfoundland and the medical care programs in Alberta and Manitoba, were examined from the points of view of financing arrangements, administrative techniques, population covered and benefits offered.

Cost and utilization data concerning medical care provided to recipients of social assistance in various provinces were collected. Further information was gathered from voluntary medical and hospital prepayment plans, whose activities are continually expanding. Meanwhile, work on tabulation of the Sickness Survey and of the provincial health survey reports, is expected to provide extremely valuable information for the long-term planning of health insurance in Canada.

## REHABILITATION OF DISABLED PERSONS

Progress was made during the year in the implementation of some of the recommendations of the National Conference on the Rehabilitation of Disabled Persons, to which reference was made in last year's Annual Report.

The National Advisory Committee on the Rehabilitation of Disabled Persons was set up by Order-in-Council in December, 1951. The membership of the Committee is substantially the same as that suggested by the Conference: representatives of federal and provincial governments, of organized labour and employers, of voluntary health and welfare organizations, the medical profession and the universities, in addition to a few individuals with special knowledge and interest in the field.

The Committee's terms of reference are wide, including the duty and power "to advise on the subject of rehabilitation policies generally, whether in relation to government action or the activities of voluntary agencies". In addition, the Committee is to "consider and advise upon such questions relating to handicapped persons as may, from time to time, be referred to it".

First meeting of the Advisory Committee was held in Ottawa early in February. The proceedings were opened by the Prime Minister and the Ministers of the three sponsoring departments, Labor, Veterans Affairs and National Health and Welfare, welcomed the Assembly. After three days' deliberations, the Committee passed a number of resolutions dealing with priorities, personnel, vocational training and placement. The Committee recommended the establishment of a rehabilitation grant and suggested that a study be made of existing grants, in order to assess the extent to which they are being, or could be, used in meeting rehabilitation needs. The Federal Government assured the Committee of its intention of appointing a federal co-ordinator for rehabilitation as expeditiously as possible.

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### III. HOSPITAL AND MEDICAL SERVICES

#### INDIAN HEALTH SERVICES

The 80 health centres of Indian Health Services are strategically placed to serve the main groups of the 136,500 Indians and 9,300 Eskimos throughout Canada's provinces and north beyond the Arctic Circle. In 1951 some 30 of these health centres contained nursing beds to which short-term sick and obstetrical patients were admitted. Each nursing station was staffed by a graduate nurse and nurse's aide with caretaker assistance as required. The remainder of the health centres were dispensaries where medical officers or graduate nurses administered to the sick and reached out to provide public health care and search for incipient illness, particularly tuberculosis, which is still the major scourge of the Indians and Eskimos in this country.

Supporting the health centres is a network of 18 departmental hospitals. The larger of these are, in the main, sanatoria for the treatment of tuberculosis, but all—and especially the smaller hospitals—serve as community treatment centres providing all the facilities of modern community hospitals.

Public health education and practice has been the keynote of Indian Health Services, the avowed purpose being to forestall disease or detect it in the earliest stages. Emphasis has been placed on educational information for the Indians and Eskimos, immunization procedures and extensive surveys for early case-finding. Where protective efforts have failed to prevent illness, the patients have been either admitted to departmental treatment facilities or arrangements made for care by the professional and hospital services in the communities close by the patients' homes. Indian Health Services has endeavoured to ensure for Indians and Eskimos the highest quality of attention which can be provided, notwithstanding the wide dispersion and high degree of isolation of many of these peoples.

#### Health Education

On the principle that good health habits constitute the best insurance against disease, a steady drive has been maintained to raise the health consciousness of the Indians and Eskimos by exhibiting appropriate films, film strips and posters accompanied by instructive talks from the medical officers and nurses of the field staff. These messages must often be passed through an interpreter and hence must be built around fundamental principles. The publication "Good Health for Canada's Indians" has continued to be enthusiastically received by the Indians and required reprinting again during the year. A new edition of "The Book of Wisdom" for the Eskimos has been further developed. The film strip "The Starlight Story", depicting the onset, treatment and recovery of a case of tuberculosis, was completed and distributed during the year. It has received acclaim and has been in a demand even beyond Indian and Eskimo circles.

#### Protective Procedures

A determined effort is made to protect every child against the common communicable diseases through preventive inoculations. The goal is not easy to attain because of the isolation of some groups and the nomadic habits of many, making proper serial inoculations and checking exceedingly difficult. It can be stated with confidence, however, that the Indians are at least as well

protected as their neighbours while the small Eskimo groups, although not as fully protected, are less frequently exposed to communicable disease. Indian Health Services has been active in using the Bacillus-Calmette-Guerin vaccine as a protection against tuberculosis. Some 4,600 inoculations of this material were given by departmental officers during 1951 with additional numbers inoculated in community hospitals where this vaccination is regularly given each Indian baby.

### Case-Finding

Because of the value of early diagnosis, particular emphasis has been placed on case-finding procedures. The use of diagnostic chest X-rays on admissions to departmental and community hospitals has been encouraged and, in addition, a very intensive survey program has been in effect each summer. A larger number of Indians and Eskimos can be reached in this interval between the active trapping seasons, when the annual official visits are made to those Indian bands which receive Treaty payments and the Eskimos congregate on the occasion of the arrival in the North of the annual supply vessels.

There were 16 departmental survey teams in operation in the summer of 1951, and, in addition, survey work was carried out by a medical party on the Eastern Arctic Patrol vessel and by a survey party in the western Arctic using aeroplane transportation. In all, some 40,024 X-ray plates were taken during the year. The surveys were not limited to the investigation of chest disease, departmental officers being alert for indications of other illnesses. Nor was this service restricted to Indians and Eskimos since, where provincial or other case-finding agencies do not ordinarily reach, the facilities of Indian Health Services have been extended to the whole population in the interests of public health.

While this case-finding goes on each year and a large proportion of the Indian and Eskimo population has been examined repeatedly, there is a proportion of reluctant individuals, as in any population. Gentle persuasion is used to encourage attendance at the clinics but no attempt at compulsion has been used. Undoubtedly many instances of active disease thus escape detection.

Properly included under the protective procedures is the work of the eight full-time dental surgeons. They have concentrated on dental care for children of school age, making regular visits to residential and day schools to promote hygienic habits and to provide essential treatment so that the young adults may commence life with reasonably healthy mouths. Fluoridine prophylactic treatment has been given in some areas, with encouraging results. Aside from its preventive aspect, the dental service has been confined to the relief of pain and the provision of dentures for medical reasons.

### Active Treatment

The Indian Health Services' 30 nursing stations have 158 beds. The 18 departmental hospitals have a rated capacity of 2,163 beds but regularly the beds set up have exceeded the rated capacity. There has been a large waiting list for admission to the sanatoria and every foot of space has been utilized to the maximum. Some 8,000 patients were admitted to departmental hospitals during 1951 and 675,000 days of treatment provided. Of these just over 25 per cent of admissions, but 85 per cent of treatment days, were for tuberculosis. General cases remained on an average of 17 days but tuberculosis cases remain very much longer. Generally, 75 per cent of the departmental hospital beds are occupied by tuberculous patients.

In addition to those attended in Indian Health Services hospitals some 25,750 persons were admitted to community hospitals for a total of over 775,000 patient days. Although the majority of patients admitted to non-departmental hospitals are for general medical and surgical disorders, still 40 per cent of these patient-days were for treatment of tuberculosis and 14 per cent of non-departmental hospital-days were for mental illness. The departmental sanatoria are in the more western provinces. Indian and Eskimo patients are admitted to community institutions in the east and in the North-west Territories. The mentally ill are admitted to provincial institutions.

Of the 1,452,886 patient days of care provided during 1951, 849,729 were accounted for by tuberculous patients, 96,040 by the mentally ill and 507,117 by those with general medical and surgical disorders. This represents 5.8 days of hospitalization per capita on account of tuberculosis and 3.5 days per capita for general conditions. There was more than one admission to hospital for every five Indians and Eskimos living in the country.

While the 28 full-time field medical officers provided professional attention for the larger groups of Indians and Eskimos, an even greater volume of professional service has been provided through arrangements with part-time physicians and those rendering service on a fee basis. Accounts are regularly received from many hundreds of doctors and dentists in the communities near the smaller Indian groups. These, along with a host of qualified and lay persons who act as dispensers of the medical materials supplied to each group of Indians and Eskimos, have been very active partners in a service developed to provide, mostly gratuitously, comprehensive medical attention to persons of native status. It is not generally recognized that there is no obligation on the part of the federal government to provide this service except the moral responsibility of seeing that citizens do not suffer through callous neglect.

### Field Nursing Service

The heart of the field service has been the graduate nurse force staffing the smaller hospitals, nursing stations and dispensaries where they are in most intimate contact with the everyday lives of the people and can do most to raise the level of health consciousness within the homes. Augmented by part-time graduates, provincial public health nursing services, the Red Cross Outpost nurses and the Victorian Order, they press the health educational program in homes and schools, assist in case-finding, search for contacts and assist in the rehabilitation of discharged patients. They have conducted clinics in child and maternal welfare, given instruction in first-aid and home-nursing and set forth in the most fearsome weather in every type of primitive conveyance to carry their skill and sympathy to the afflicted.

Some nurses are several hundred miles from the nearest professional guidance, and must rely on their own judgment and the radioed advice of the nearest departmental medical officer. The native peoples owe an incalculable debt to these intrepid women. The fruits of their labours are the recent increases in population through their influence on infant and maternal survival which has steadily improved over the years. What were once declining races now show a normal population increase of about  $1\frac{1}{2}$  per cent per year.

### Tuberculosis

Although the incidence of tuberculosis among Indians and Eskimos is high in comparison with the rest of the population in Canada, it is similar to that in comparable groups of other countries. Over the past few years the tuberculosis death-rate among Indians and Eskimos has been reduced at a

rate parallel to or better than that in the remainder of the population. In 1949 the rate was 399.6 per 100,000 but in 1950 it was sharply reduced to 298.8. The comparable figures for the whole population were 1949—30.4, and 1950—25.9.

The attack on the tuberculosis problem is made through vigorous case-finding, isolation in the homes or sanatoria and the most modern medical and surgical procedures. Extensive use is made of all proven antibiotics as adjuncts to the accepted principles of rest for all patients and surgery for those whose period in hospital can be shortened by this means. The 550-bed Charles Camshell Hospital at Edmonton carried out 175 major chest operations during 1951. Similar work went on at other departmental institutions or in non-departmental hospitals.

All field nurses and certain particularly-experienced supervisors keep discharged patients under observation at home to guide rehabilitation and obviate relapse.

### **Extension of Services**

During 1951 some 68 treatment beds were added through alterations made to existing facilities and the completion of a 28-bed hospital at Hobbema, Alberta. Health centres with beds were brought into operation at Lansdowne House and Pikangikum in northwestern Ontario and Rupert's House on James Bay in Quebec. Dispenseries were completed at Christian Island in Ontario; Seven Islands, Quebec; and Shubenacadie, Nova Scotia.

There was an addition of two medical officers, bringing the total of full-time medical officers to 65. Also four field nurses were added, for a total of 94. There were some 181 nurses regularly employed in departmental hospitals.

During the summer months 25 senior medical students were employed to assist in case-finding procedures and in the larger hospitals.

### **Co-operation with Other Agencies**

It is considered essential for the social well-being of the Indians and Eskimos that the health program for them be identical with and, so far as possible, integrated with that of their neighbours. Every opportunity was taken to use provincial public health facilities on a reciprocal basis. Provincial health regulations guided public health procedures; provincial health insurance, such as the British Columbia Hospital Insurance Service, continued to be used where available.

Indian Health Services enjoyed extensive assistance from federal government agencies such as Department of National Defence treatment and air transport services, the Royal Canadian Mounted Police, and the Signal Services of the Departments of National Defence and Transport. Close co-operation existed between the officers of Indian Health Services, the Indian Affairs Branch of the Department of Citizenship and Immigration responsible for the welfare of Indians, and those of the Northern Administration and Lands Branch of the Department of Resources and Development which administers Eskimo affairs. Administration officers regularly acted as local public health officers while Indian Health Services provided the professional advice. The Director of Indian Health Services was officially appointed Chief Health Officer of the Northwest Territories.

As in the past, the goodwill of local practitioners, community hospitals and countless persons interested in Indians and Eskimos has contributed greatly to the success of the common endeavour on behalf of the health of these peoples.

## LEPROSY

There are two institutions in Canada where lepers are hospitalized. Hospitalization and treatment of lepers in Canada is under the supervision of this Department.

The hospitals are located in Tracadie, N.B., and Bentinck Island, B.C. The former hospital is the Hotel Dieu de Saint-Joseph which has a twelve-bed wing for the exclusive treatment of lepers. This institution is assisted by a federal grant. The hospital at Bentinck Island is fully maintained and staffed by the Department.

Both institutions utilize the newer drugs available for the treatment of leprosy. These drugs are administered under close supervision and their results and reactions are closely observed.

Educational and recreational facilities are provided to all patients and each patient is encouraged to develop some hobby or handicraft.

During the year, two patients were admitted to Bentinck Island and one to Tracadie. There were no deaths in either institution. Two patients were discharged from Tracadie and one from Bentinck Island.

There are five patients remaining in the Tracadie hospital. Three show evidence of active leprosy in various stages. The other two are arrested cases but require permanent institutional care. Of the five patients, two are Acadians, two of Russian origin and one Chinese.

The three patients remaining at the Bentinck Island Hospital are Chinese.

### Leprosaria—Annual Census

	Tracadie	Bentinck Island
Remaining from last year .....	6	2
Admitted during the year .....	1	2
Died during the year .....	0	0
Discharged during the year .....	2	1
Remaining in Hospital .....	5	3

## SICK MARINERS SERVICE

Treatment of sick mariners on a prepaid basis has been provided at Canadian ports since 1867, under the authority of Part V of the Canada Shipping Act.

Medical care and hospitalization are provided for all crew members of foreign-going vessels arriving in Canada and for crews of coastwise vessels in the interprovincial trade. Canadian fishing and government vessels, if they desire, may take advantage of the Sick Mariners Service. The first payment of dues by fishing vessels must be made prior to their first voyage of the calendar year.

Medical care covers all conditions, with the exception of permanent insanity, up to a maximum of one year. The only dental care provided is the emergency extraction of teeth or extractions required to alleviate a concurrent medical condition.

Sick Mariners Dues are collected by Collectors of Customs on every ship arriving at any port in the provinces of Nova Scotia, Prince Edward Island, New Brunswick, Newfoundland, Quebec and British Columbia, and at ports

on Hudson Bay and James Bay in the provinces of Ontario and Manitoba. The amount of dues collected is not sufficient to cover the cost of the services rendered. During the fiscal year 1951-52 the Sick Mariners Dues amounted to \$258,728. The cost of medical services provided amounted to \$595,049.

The method of granting authority for treatment is kept as simple as possible. The sick mariner applies to his captain for treatment. The captain completes a concise form indicating the necessary information about the crew member and his vessel and the dates that Sick Mariners Dues were paid. The seaman is then sent to the local Collector of Customs who verifies the facts and endorses the application, referring the patient to the Port Physician. In case of accident or emergency the seaman may be sent directly to the doctor or hospital for sick mariners.

Sick Mariners Clinics staffed by medical officers of the Department are located at Vancouver, Montreal, Quebec, Saint John, Halifax and Sydney. These clinics are conveniently located in close proximity to the waterfront. They are modern in all respects and have complete diagnostic and treatment facilities. At the ports of Victoria, Port Alberni and Powell River in British Columbia; Port Alfred and Gaspé in Quebec; Lunenburg, Windsor, Liverpool, Pictou, Digby, Lockeport and Yarmouth in Nova Scotia; and Shippegan in New Brunswick, sick mariners are treated by Port Physicians who are employed on a part-time salary based on the amount of work performed. In the smaller ports and fishing hamlets, there are Port Physicians who attend to sick mariners on a fee for service basis. Patients treated in the clinics operated by this Department in the current year numbered 7,853. Those treated by part-time salaried physicians numbered 4,248, and those treated by doctors on a fee-for-service basis numbered 11,214.

At the Sydney Marine Hospital, Indian and Eskimo patients are hospitalized for the Indian Health Services.

Details of sick mariners treatment in relation to vessels' dues and expenditures will be found in Table 15, page 137.

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## **IV. EXAMINATION SERVICES**

### **CIVIL AVIATION MEDICINE**

The Division of Civil Aviation Medicine has continued to carry out its functions as medical adviser to the Department of Transport (Air Services) on physical standards for aviation personnel and also to act in an advisory capacity to the Department of Transport, other government departments, interested organizations and the public generally, on the health, safety and comfort of aircrew, groundcrew and passengers by air.

In the first instance the Division advises the Superintendent of Air Regulations, Civil Aviation Division, in regard to the physical fitness of pilot applicants, licensed pilots, flight navigators and air traffic controllers, and the Chief Inspector of Radio, Telecommunications Division, in regard to flight radio operators. During the year, medical examination reports for approximately 10,163 pilots, 193 air traffic controllers, 31 flight radio operators and 39 flight navigators were assessed. A total of 1,115 electro-cardiograms of commercial and transport pilots were evaluated. The interim report of an audiometric survey of 510 licensed commercial and transport pilots was submitted to the Division.

To maintain a high standard in the reporting of the medical examinations, the Division administers an aviation medical examiner service, through personal contact with the examiners and by keeping them informed of advances and trends in aviation medicine through regional meetings or attendance at courses held at the Institute of Aviation Medicine, R.C.A.F. Station, Toronto. There are 269 civil aviation medical examiners approved by the Department of Transport, 33 of whom are newly appointed. These examiners are licensed physicians with an interest in or knowledge of civil aviation medicine.

#### **Regional Boards**

Five Regional Medical Consultant Boards functioned during the year and reviewed approximately 30 cases. Eight special cases were examined by consultants on a fee-for-service basis. The Boards were established to aid in rendering a fair assessment of borderline or contentious cases, especially for the commercially-licensed pilots.

#### **Air Safety**

Since civil aviation medicine is concerned with safety and since there is a marked trend in civil aviation to emphasize prevention, the Division is being requested with increasing frequency to study and advise on the preventive aspects of safety in air travel. An example of this work is the notable progress being achieved in crash injury investigation and reporting, with recommendations being made in regard to the design of the aircraft, the use of rear-facing seats and a satisfactory type of safety belt or harness.

During the year investigation has continued in the following subjects associated with aviation medicine: emergency means of meeting explosive decompression at high altitudes; psychological studies aimed at improving commercial and transport pilot selection; degree of hearing loss and cause of the hearing loss as evidenced by personnel licensed by the Department of Transport to fly commercially; high altitude aerial photography in unpressurized aircraft; crash injury reporting; color perception requirements for commercial

and private pilots. In an effort to improve the facilities for color perception testing, thirteen color perception lanterns have been obtained from the manufacturer and are being distributed to aviation medical examiners across the country.

### Co-operative Services

Liaison with the International Civil Aviation Organization, the R.C.A.F. and the Air Cadet League of Canada has continued. A total of 470 medical examination reports for the flying training program under the terms of reference of the R.C.A.F. "Exercise Chipmunk" and approximately 1,000 medical examination reports for the scholarship flying training program sponsored by the R.C.A.F. and the Air Cadet League of Canada, were assessed to the medical standards of the R.C.A.F. and the Department of Transport. The facilities and staff of the Institute of Aviation Medicine, R.C.A.F. Station, Toronto, have made a valuable contribution to this whole field by providing instruction for civilian pilots engaged in high altitude flying, by assisting in the special investigations required by borderline clinical cases, and by advising the Division generally in problems associated with aviation medicine.

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## CIVIL SERVICE HEALTH

The Civil Service Health Division has continued to discharge its responsibility for the conservation and promotion of the health of federal government employees. There were no fundamental changes in the functions, activities, or basic policies of the Division during the past year.

The advisory, diagnostic, and emergency medical care facilities of the Health Centre in Ottawa have worked to full capacity. No additional Health Units were opened. The 17 Health Units previously established, and staffed by 38 nursing counsellors, continued to provide a complete health-counselling service to some 20,000 civil servants. In addition, there has been an appreciable increase in the requests from smaller isolated groups not directly served by the Health Units for occasional or periodic visits by the nursing counsellors and other professional staff to discuss local problems and advise on urgent cases.

Statistical data on sickness absenteeism in the Civil Service, available from all Certificates of Disability For Duty, is collected and coded in the Certificate Review Section by the Public Health Section of the Dominion Bureau of Statistics. The material is analyzed by the Bureau and forms the basis of an Annual Statistical Report on "Illness in the Civil Service".

In the administration of its services, the division has worked closely with other departments of government and with other divisions of the Department. For medical examinations and consultations the division has called freely upon the facilities of the Department of Veterans Affairs, and within this Department on the Divisions of Quarantine, Immigration Medical and Sick Mariners Service. The Industrial Health Division and the Public Health Engineering Division have assisted in the investigation and improvement of working conditions, and the Nutrition Division in the investigation of nutritional problems.

Senior officers of the Division have also participated in various extra-divisional activities. The Chief Supervisor of Nursing Counsellors has continued in her capacity as the Department's Consultant in Nursing. The Chief of the Division, the Assistant Chief, and the Chief Supervisor of Nursing Counsellors, have taken part in the planning and organization of civil defence.

The Departments of Trade and Commerce and External Affairs, concerned about the health of their overseas staffs, made representations concerning both the physical fitness and emotional stability of personnel posted abroad or reassigned from one post to another. The division assumed the task of conducting regular medical examinations and assessing all such personnel whenever such examination was possible.

The Division was consulted concerning visual deterioration among employees of the Department of Mines and Technical Surveys engaged in topographical survey work. This work demands a high degree of visual acuity and depth perception. Careful study of this problem was made and an approved industrial visual screening apparatus secured. Pre-employment and periodic eye examinations designed to detect visual defects and visual deterioration over prolonged periods are now possible. Furthermore, visual standards can now be established for the selection of suitable candidates for this exacting work.

The Division continues to be used as a demonstration unit by several universities. For the first time, a request has been received from a university school of nursing for a block of field work for two post-graduate nurses.

Several departments already receiving the division's services have indicated a desire to provide more suitable accommodation for existing health units or to provide space for additional units. Plans for such local expansion which have been completed during the past fiscal year will bring the total of the division's Health Units operating in the Ottawa area up to 19, thus providing a complete health-counselling service to almost 22,000 civil servants.

### Statistical Tables

Tables 1 to 5, pages 123 to 126, summarize the activities of the Civil Service Health Division for the fiscal year.

Table 1 gives the total visits made to the Health Units during the fiscal year by sex, nature and classification of visits, and disposal. As this division has now been in operation for a period of five years, the totals for the four previous years have been included in the table for comparison. A total of 169,084 visits, an increase of slightly in excess of 33,000 over the previous year, were made to Health Units. The male to female ratio of approximately 4:5 is of interest when considered in relation to the over-all sex distribution of the Civil Service population in Ottawa, namely, males 53, females 47. Of the total number of visits recorded, 123,000, or almost 73 per cent, were first visits or visits resulting from new disabilities. The remainder were repeat visits to nursing counsellors for some condition previously reported. Of the over-all total, slightly over 20 per cent were for visits in which the socio-economic factors were primarily responsible or played a major contributory role. The factors most frequently involved in this group of visits were those related to personal health and hygiene, nutrition and budgeting, family health problems, emotional disturbances, and factors associated with severe physical handicaps.

Respiratory, digestive, diseases of the skin and cellular system, and menstrual disorders, in that order, are the predominating causes of visits to the Health Units. The ratio of respiratory to digestive disorders over the last fiscal year was 2:1, which compares favourably with experience of the previous four years. It is of particular interest to note that an extremely low percentage of employees (2.4 per cent) were sent home following a first visit to the Health Unit.

It will be apparent from examination of Table 1 that each year has seen an appreciable increase in visits to the Health Units, allowing for the expansion in the health counselling service during the first three years. As an indication

of the yearly increased participation, the ratio of employee health unit visits to the total number of persons supervised may be utilized. This "Index of Participation" may be expressed as the average monthly number of employee health unit visits per 100 personnel supervised. For the five-year periods ending 31 March 1952, these were 33, 40, 58, 65, and 70. Part of this increased participation is undoubtedly due to the policy of encouraging government departments to have employees report to the Health Unit following an absence on account of illness. The value of such return-to-work visits lies in controlling absenteeism, supervising the health of employees, protecting the health of fellow workers, and affording a medium of health education and instruction as well as interpreting the health service program to the civil service population.

Table 2 shows the seasonal fluctuation of visits to Health Units. The busiest months, as might be expected, were the late fall and winter months. Comparison of the incidence of respiratory and digestive diseases during the summer and winter months was of particular interest.

Table 3 gives a summary of the work conducted at the Health Centre. Some 6,844 examinations and consultations and treatment for emergency conditions were conducted by the staff of the Health Centre.

Table 4 summarizes the activities of the consultant psychologist. His services have been in increasing demand. During the year he has conducted a total of 559 consultations or interviews.

Table 5 summarizes retirements from the government service during the past fiscal year for medical reasons by cause of disability, and age group. Diseases of the circulatory system, the nervous system, and of the bones and organs of movement, in that order, constitute the chief causes of separation on medical grounds from the public service. Of the 225 separations, 190, or 80 per cent, occurred in the 50-60 age group.

The past year has been one of unusual activity in the employment phase of the Civil Service, of sharp increases and decreases, and of generally 'high turnover. This has meant an increased need for counselling and for professional assistance with job-adjustment and emotional problems. Employment of a growing volume of married women presents more occasions to discuss family health and social adjustments, but it also creates new problems in administration and supervision.

The nursing counsellors have felt real concern about the extreme fatigue, lowered resistance and work efficiency, and the effect on family life which they have observed in civil servants who are carrying two jobs. Efforts have been made to encourage employees to reduce such outside work to a minimum and to offset its effects in every possible way.

This past year has seen increasing integration of services with those of the community health and welfare agencies. The Division has participated in the development of the health division of the Ottawa Council of Social Agencies, particularly in the creation of a recognized system of inter-agency referrals, and the organization of a health workers' group for the study of community health problems. These latter two developments have stimulated interest in comparable projects for local social workers.

## IMMIGRATION MEDICAL

The Immigration Medical Service acts in a medical advisory capacity to the Department of Citizenship and Immigration on medical matters pertaining to immigration and is responsible for the examination and treatment of all immigrants arriving in Canada. The majority of immigrants are examined overseas by Canadian medical officers and locally-engaged physicians of high repute who are directly under the supervision of Canadian medical officers. During the year, due to the sudden increase in the number of prospective immigrants presented for examination in the British Isles and Continental Europe, additional doctors were required. Canadian physicians on post-graduate studies in these countries were temporarily employed on per diem and per monthly basis, and rendered invaluable service to this Department.

The majority of immigrants undergo a complete medical examination overseas. This examination includes an X-ray of the chest and any additional radiological and laboratory investigation that may be required. All immigrants arriving in Canada are again inspected and those who have not had a complete medical examination overseas receive a detailed examination at the port of arrival. Immigration hospitals are maintained at the principal ports in Canada. These hospitals are fully equipped and provide up-to-date facilities for the diagnosis and treatment of immigrants on their arrival at these ports.

The overseas headquarters for the British Isles and Continental Europe is in London, England. Offices staffed by Canadian medical officers are also maintained in Liverpool, Glasgow, Belfast, Paris, Brussels, The Hague, Copenhagen, Stockholm, Karlsruhe, Bremen, Hanover, Linz, Rome, Naples and Athens. All immigration medical examinations carried out by Canadian medical officers are provided free of charge. In addition, free chest X-ray is provided to immigrants reporting to the following offices for examination: London, Liverpool, Glasgow, Belfast, Dublin and Paris.

The number of full-time medical officers in the overseas service increased from 33 to 43 during the year. In addition to these full-time medical officers, local roster doctors and temporarily-appointed Canadian physicians were employed throughout the British Isles and Continental Europe. Roster doctors are also employed in Karachi, New Delhi and Hong Kong.

A total of 303,467 immigrants were examined abroad and 203,450 on arrival in Canada. Of the number examined, there were 82,548 from the British Isles, 217,855 from Europe, and 3,064 from the Orient.

During the year Immigration Hospitals at Halifax and Quebec were operated at capacity and, in the winter months, an immigration hospital at Saint John, N.B., was also in operation. Immigrants who became ill en route to Canada were treated in these institutions, which are fully modern and well equipped.

Medical care was also provided for persons accommodated in buildings operated by the Department of Citizenship and Immigration, and in the major Canadian seaports, for persons becoming ill prior to their departure for other parts of Canada.

Statistical data on the immigration medical activities of the department are contained in Tables 12 and 13 on pages 133 and 135.

## QUARANTINE

The Quarantine Service shares with the Sick Mariners' Service the distinction of being the oldest health activity of the federal government. It is operated under the authority of the Quarantine Act and Regulations to prevent the entry of infectious diseases into Canada. In keeping with modern public health trends, quarantine procedures have been changed to make full use of the protection afforded by the various immunization procedures.

During the year, all persons coming from abroad were inspected on arrival and vessels other than those arriving from infectious areas or those with sickness on board were given radio pratique which permitted them to dock without delay. Ships from infected areas were granted quarantine clearance only after a thorough inspection of all on board and, in the case of vessels from plague ports, after an inspection for evidence of rat infestation.

Organized quarantine stations under the control of a Quarantine Medical Officer are located at William Head, B.C., with sub-stations at Vancouver, Victoria and Esquimalt; at Quebec City, P.Q.; with sub-stations at Rimouski, Port Alfred, Sorel, Three Rivers and Montreal; at Halifax, N.S., and at Saint John, N.B.

Quarantine inspections under the direction of a Quarantine Medical Officer are also carried out at Goose Bay, Gander, Stephenville, Sydney, Halifax, Moncton, Montreal, Toronto and Vancouver Airports; the personnel at Gander and Montreal being on a full-time basis.

Duplicate pratique was issued to 675 vessels on request. Duplicate pratiques issued by the Canadian Quarantine Service are valid for clearance through the United States Quarantine Service, and, conversely, duplicate pratiques issued by the United States Public Health Service are accepted in lieu of a Canadian quarantine clearance.

During the year, 2,122 vessels were granted radio pratique. This is a provisional clearance which permits a vessel to dock immediately on arrival, following which a more detailed and final inspection takes place and final clearance is granted. Radio pratique is only issued to vessels from countries free from certain diseases and where no illness has occurred during the voyage.

Local Customs Officers, in their capacity as Quarantine Officers at unorganized ports, reported the entry of 552 vessels. A total of 2,816 vessels, having on board 477,061 persons, 197,453 of whom were crew members and 279,608 passengers, were inspected by medical officers of the service. In addition, 7,044 aircraft, carrying 285,996 persons, were inspected on arrival from abroad. Of a total of 824 vessels inspected for rodents, 524 had come from plague infected ports. Sixty-eight vessels were fumigated, 342 were granted exemption certificates, 289 had their certificates endorsed, and 125 were remanded to other ports. A total of 394 rats and 275 mice were recovered following fumigation. In addition to the fumigation of merchant vessels, the department, on request, fumigated various government ships and shore establishments.

International Certificates of Inoculation and Vaccination, prepared in booklet form, were distributed on request to persons travelling abroad; the demand for these greatly increased during the year. Active immunization is provided free of charge by the Quarantine Service at thirteen centres strategically located across Canada from coast to coast. A total of 700 inoculations were carried out. Vaccination against smallpox was also carried out free of charge at the various organized quarantine stations named above.

Additional duties carried out by departmental medical officers included the medical examination of pilots, lighthouse keepers, radio operators, and other civil servants serving in remote areas; immigration medical examinations; the treatment of sick mariners, and the pre-employment and periodic examination of marine personnel employed by the Department of Transport.

The Quarantine Service and Trans-Canada Airlines co-operate in the joint operation of a clinic at Montreal's Dorval Airport, International Terminal Building.

Statistical data on quarantine activities are contained in Tables 14 and 16, pages 136 and 138.

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## **V. INSPECTION AND ENFORCEMENT SERVICES**

### **FOOD AND DRUGS**

The Food and Drugs Act and the Proprietary or Patent Medicine Act govern the safety, purity and quality, as well as the labelling and advertising, of all foods, drugs and cosmetics. Both Acts are administered by the Food and Drug Divisions of the Department, with assistance, in the case of enforcement activity and the drafting of legislation and regulations, from the Department's Legal Division.

The enforcement of legislation in Canada to protect the consumer from adulteration of food, drink and drugs began with the Adulteration Act which became effective on January 1, 1875. This Act, the first of its kind in the Western hemisphere, has had considerable influence on the development of the food and drug industries in Canada as well as on legislation in other countries. The Food and Drugs Act which succeeded the Adulteration Act in 1920 is subject to continuous review and revision in the light of changing conditions. A committee, consisting of officers of the Food and Drug Divisions and the Legal Division, has studied the Food and Drugs Act with a view to amendment of the Act embodying three kinds of changes: those which will clarify interpretation of the Act and arrange it in a more logical and rational order; those which will give additional powers deemed necessary for the protection of public health, by ensuring safe conditions of processing and recording of sale; and those considered necessary on a constitutional basis.

A major step in the protection of public health was taken on September 5, 1951, when regulations were added under the Food and Drugs Act requiring submission of data by manufacturers regarding the safety of new drugs. Drug manufacturers must wait until their submission has been accepted by the Department before marketing new drugs. A notice of the acceptability, including recommendations on the terms of sale, usually may be given within two months but a period of six months is set as the maximum for a decision. Submissions regarding 45 new drugs were reviewed from the inauguration of this control in September until March 31, 1952.

Effective working relationships with industry were maintained in the drafting of standards and regulations. Standards of composition and quality of flour and bread have been under active discussion throughout the year. This discussion culminated in a conference unique in food and drug history in that it brought together representatives of the consumers, industry and government. The result was increased mutual understanding of the problems involved; the ground-work was laid for regulations that would at the same time be practical, enforceable and in the interests of protection of the consuming public.

During the year, laboratories were established in the inspection offices in Saint John, N.B., and St. John's, Nfld., to obtain more rapid examination of import shipments at these ports. A more flexible scheme for the use of scientifically-qualified inspection staff was introduced and found to be satisfactory. As a result, it is planned to extend the scheme to include laboratories in the inspection offices in Windsor, Ont., Sydney, N.S., and Calgary, Alta.

Constant liaison with other enforcement agencies is necessary if duplication and gaps in enforcement are to be prevented. In this connection, assistance of a technical or enforcement nature was given to a number of other government departments and agencies, including the Department of Agriculture, the Department of Fisheries, and the Royal Canadian Mounted Police.

Canadian and International Standard preparations used in the assay of drugs were distributed to manufacturers and research institutions on request.

Since the Food and Drugs Act is international to the extent that it applies to imports, active collaboration must be maintained with other countries if the quality of imports is to be kept at satisfactory levels. The department takes an active interest in legislation and standards and methods of analysis of foods and drugs in effect in foreign countries and established by international or foreign authorities, including the World Health Organization, the United States Narcotic Commission, the British Pharmacopoeia and United States Pharmacopoeia Commissions, the Association of Official Agricultural Chemists, and the United States Food and Drug Administration.

The Divisions have several panels or boards of experts to advise on technical and medical problems. These include: the Advisory Panel on Foods, the Advisory Panel on Drugs, the Advisory Board on Proprietary or Patent Medicines, and the Canadian Committee on Pharmacopoeial Standards. Members of all boards or panels are medical men, pharmacists or other scientists who are university professors, clinicians or technical people in industry. They are selected because of their knowledge and also because, in many instances, the advice of independent experts not in government service is of considerable advantage. Much of the work is carried on by correspondence, but the Canadian Committee on Pharmacopoeial Standards meets at least once a year, the last meeting having been held in Ottawa on November 23, 1951.

## Enforcement

The usual enforcement activities continued to occupy a considerable portion of the Division's time. These include: examination of import shipments and domestic foods and drugs for compliance with the relevant Acts; advice to manufacturers, importers and retailers on the requirements for compliance; scrutiny of radio commercials referring to foods, drugs, or cosmetics for the Canadian Broadcasting Corporation, under terms of the Broadcasting Act; examination of labels and advertising; assistance to other divisions and departments of government and some prosecutions for violations of the Acts. This work included review of 18,365 radio commercials and 5,325 labels and advertisements. Enforcement action may take one or more forms, depending on the circumstances of each case, and may consist of warnings, seizures or prosecutions. During the year 1,477 warnings were issued, 35 seizures of stocks of foods or drugs were made, and 104 prosecutions were carried out. Seizures and prosecutions are the last resort and serious efforts are made to correct deficiencies at the manufacturing level by warnings and advice.

More rigid enforcement of the prescription requirements of the regulations was applied with respect to the distribution of barbiturates, sulfa drugs and others. Prosecutions were found necessary in a number of cases to emphasize the seriousness of the distribution of these potent drugs to the general public without the supervision of a physician.

The high cost of meat led to an extensive "bootleg" operation in the sale of horse-meat. This meat was sold as beef and presumably came from uninspected animals. A series of 21 successful prosecutions have helped to curtail this practice and encouraged the establishment of horse-meat stores where inspected meat is sold with proper identification.

Increased efforts were made to study the sanitary practices of food and drugs manufacturing and processing plants in their relation to the quality and purity of the foods and drugs produced. Preliminary surveys of flour mills,

small canneries and cheese manufacturing plants have revealed that much remains to be accomplished with respect to sanitation and cleanliness in some of these plants. An extensive investigation of the sanitation of Canadian flour mills and their products was carried out in 1951 involving 50 mills. The proprietors of the mills studied in this survey were informed of their relative standing with respect to other mills and their replies indicate a willingness to take greater precautions with a view to eliminating contamination.

Practices used in coating, waxing and preserving raw food originating in other countries have increased the need for close scrutiny of this class of imported food. Deterioration of foods in storage and contamination under poor storage conditions necessitate a follow-up procedure on goods inspected at the point of manufacture or import.

A relatively large quantity of butter was imported into Canada during 1951 from Scandinavian countries and from New Zealand. These shipments were examined and found to be satisfactory for import. Special attention also was given to food colors, some of which, in the past, had represented a definite health hazard, and it was gratifying to find that no large problems presented themselves in this field during the year. Similarly, foreign exporters of dried fruits and nuts appear to be aware of Canadian standards for these products and the only significant problem encountered in this field during the year was in respect of some shipments of shelled walnuts.

The Information Centre, in its fourth year of operation, has prepared and issued 15 Trade Information and 37 Staff Information Letters and issued weekly reports on detained imports of foods, drugs, and cosmetics. The cataloguing of all drugs manufactured in Canada, including the collection of specimen labels, was continued during the year.

### Scientific and Technical Studies

Scientific and technical studies related to food and drug legislation may be divided into five classes: development of analytical methods and standards; fundamental research, including studies of the actions of new drugs or chemicals used or intended for use in foods; surveys of the labelling and advertising of nationally or locally advertised products; routine analyses of samples where adulteration or misbranding is suspected and surveys of various products collected from all parts of Canada. Both of these last-named functions are carried out mainly in the regional laboratories and are summarized in Tables 6 to 8 (incl.) Pages 127 to 129.

### Development of Analytical Methods and Standards

Work to develop new methods of assay and new standards for foods or drugs occupied a large part of the time in the central laboratories in Ottawa with some assistance from the regional laboratories.

### Surveys of Labelling and Advertising

A survey was carried out of the meat products manufactured in establishments not registered with the Department of Agriculture. Of these products, 76 per cent were found to be misbranded. However, none were adulterated. Those which were properly labelled were, for the most part, manufactured in Alberta and Manitoba. In addition, as routine work, labels of material examined in the laboratories were examined for compliance with the regulations, which resulted in reasonably complete surveys of the labelling of various classes of foods and drugs. The collection of labels for pharmaceutical products by companies was continued and 5,084 labels and cartons were added to the master files.

## Laboratory Studies

The following are examples of the studies conducted in the various sections of laboratory services in the central laboratory at Ottawa. Much of the fundamental research forming part of these studies has been reported in scientific literature.

### Food Chemistry Section

#### *Arsenic in Canned Foods*

While in many areas the new organic insecticides are largely replacing arsenic compounds as spray materials, sufficient arsenic is still being used to warrant an investigation of the possible contamination of canned fruits by this element. A modified method was devised to determine the arsenic content of canned fruits from all parts of the country and it was reassuring to find that no significant amounts of arsenic were present.

#### *Starch in Meat Products*

As relatively small amounts of starchy materials or dry milk powder are frequently added to meat products to improve their texture, a procedure was developed by which it is possible to determine the presence of small amounts of starch in milk powder, soy flour, sugar and glycogen.

#### *Antioxidants*

Methods developed in this laboratory for the determination of antioxidants were applied to a study to establish the keeping qualities of lard to which antioxidants had been added.

#### *Fill of Containers*

A method has been developed for the estimation of the fill of containers of free-flowing food products.

#### *Stabilizers and Emulsifying Agents*

As small amounts of vegetable gums, agar, gelatin, Irish moss and other stabilizers are employed in a wide variety of food products, a qualitative procedure was developed for their detection and identification in foods.

#### *Metallic Impurities*

The study on the metallic impurities of various food products was continued and detailed information was accumulated on edible bone flour and jelling agents. The fluorine content of the bone flour imported into Canada was found to be quite high and as a result of this information a limit on the fluorine content in this product has been included in the regulations as well as limits on arsenic, lead, zinc and copper.

### Microbiology Section

A nation-wide survey of the bacteriology and filth content of cheese has revealed a positive enteric and Staphylococcus-poisoning hazard in soft cheeses made from unpasteurized milk. A substantial proportion of all cheeses contain an objectionable content of manurial fragments and bovine and rodent hairs. A staphylococcus problem is growing in significance due to the selective survival of Staphylococci in milk from cows treated with penicillin. Penicillin-resistant enterotoxic strains of Staphylococci have been shown by phage-typing methods to have been disseminated in large numbers from Halifax to Vancouver in cheese from a single factory. These studies were basic to the formulation of new cheese regulations.

Studies in the detection of certain bacterial toxins in foods have progressed favourably. The presence of dermonecrotic toxins from Staphylococci is a useful indication of the existence of enterotoxins in foods. Attendant upon these studies, several requests for aid in determining the cause of food-poisoning outbreaks have been received from the Department of Agriculture, from the National Research Council and from industry. Conclusions satisfactory to all three have been reported.

A survey of 50 representative flour mills has established a general correlation between the degree of insect infestation of the mill and the content of insect fragments and microorganisms in the flour.

New methods developed for the detection of microscopic filth were applied to surveys of market flour, cake-mixes and packaged egg-products. Fears of a Salmonella hazard in products containing egg-powders have been allayed by failure to isolate Salmonella from 300 market packages. Microbial and insect-fragment counts were unnecessarily high in a few instances.

The microbial quality of bone-meal-flour is now routinely assayed in accord with newly devised standards.

### **Vitamin and Nutrition Section**

A comprehensive survey, aimed at including all vitamin manufacturers, has indicated to date that there are companies which have no analytical control facilities for checking the potency of their vitamin products. An educational campaign has been initiated in an effort to convince these manufacturers of the need for effective control.

Collaborative studies have been continued with the U.S. Pharmacopoeia on the microbiological assay for vitamin B<sub>12</sub> and with A.O.A.C. on Vitamin A and rutin.

A simple and direct procedure has been published for the estimation of tocopherol (Vitamin E) in tocopherol concentrates. A comparison of eight methods for the estimation of vitamin C in pharmaceuticals has been completed.

Microbiological and chemical studies on vitamin B<sub>12</sub> have resulted in the development of a procedure for the differential estimation of vitamins B<sub>12</sub> and B<sub>12b</sub> utilizing the microbiological assay. The method is based on the destruction of vitamin B<sub>12b</sub> with ascorbic acid.

### **Alcohol, Cosmetic and Color Section**

#### *Alcoholic Beverages*

The survey of distilled beverages and wines on the Canadian market was continued. Samples analysed were mainly Scotch Whiskies and Rums. A fundamental investigation of the maturing process in spirituous beverages was begun.

#### *Cosmetics*

This Section participated in collaborative studies of methods of analysis of deodorants, "cold wave" solutions and "neutralisers", with the Cosmetic Division of the U.S. Food and Drug Administration.

#### *Food Colors*

The exhaustive study of the dithizone method of determining traces of heavy metals in food colors, begun last year, was completed and critically reported upon. This work was undertaken in collaboration with the U.S. Food and Drug Administration. A chromatographic method of separation of the colors in mixtures of colors was worked out in the laboratory.

## Pharmacology and Toxicology Section

### *Verarum Alkaloids*

A suitable test method based on the hypotensive effect of these alkaloids in roosters was worked out.

### *Antihistamines*

An investigation was completed on a method to evaluate the local anaesthetic properties of the antihistamines.

### *Nitrite in Meat Products*

A study was commenced to ascertain if the permitted amount of nitrite in meat products was injurious to health.

### *Dimercaprol (BAL)*

A collaborative study was commenced to determine if the British Standard BAL would be a suitable standard to adopt as an International Standard.

### *Posterior Pituitary Extracts*

A method for determining the pressor potency of these extracts in the adult male rat has been worked out.

### *Antabuse*

Studies on the potentiation of barbiturate action by Antabuse were continued.

### *Analgesics*

An investigation of the mechanism of action of addicting analgesics through their effect on enzyme systems has been instituted.

### *Bread Additives*

A long-term chronic toxicity test on some of the chemicals added to bread is in progress.

### *Scallop Toxin*

Attempts to isolate the active component from extract of scallop digestive glands are being made.

### *Acute Toxicities*

Acute toxicities of Potassium Iodide, Potassium Iodate and Sodium Nitrite were determined.

### *Coronary Dilator Drugs*

For quantitative studies on these drugs a method has been worked out on isolated mammalian hearts and in the intact animal. Investigations concerning the coronary dilator actions of aminophylline, khellin, papaverine, paveril, and d-tocopherol are underway.

### *Insecticides*

DDT, chlordane, parathion, toxaphene, lindane, methoxychlor and T.E.P.P. were studied for their possible deleterious effect on the isolated rabbit heart. No significant effect on the heart-beat or coronary flow was detected at doses roughly corresponding to 10 times the amount that could be taken with foods contaminated with the highest allowable levels.

## Physiology and Hormones Section

Investigation of the adrenal cholesterol response to ACTH indicated that a dose approximately 1,000 times that used in the adrenal ascorbic acid depletion method was required. The factors affecting the level of adrenal cholesterol were examined in an attempt to improve this method of assay. A study of some of the factors influencing the precision of the biological assay of adrenal cortical hormones was initiated, and it has been established that liver reducing substances provide as good a criterion of the response to these hormones as liver glycogen. A satisfactory method of assay was developed using adrenalectomized male mice. Collaborative work with the United States Pharmacopoeia is under way on the bio-assay of adrenal cortical extracts. The investigation of chemical procedures for the assay of cortisone was continued.

It has been demonstrated that the potency of the different types of insulin preparations can be determined by means of the mouse convulsion test, employing crystalline insulin as the standard. The hypoglycemic response to insulin in mice can be detected by placing the treated animals on sloping screens. This method of assay has been shown to be as precise as the mouse convulsion test described in the British Pharmacopoeia (1948). A collaborative assay of the Third International Standard for insulin was undertaken at the request of the Committee on Biological Standardization of the World Health Organization.

Toxicity studies on stilbestrol have been carried out to determine the amount per diem required to stop breeding in the adult male rat. Vitamins A and E did not influence the inhibitory action of stilbestrol on the accessory sex organs in the male rat. A study on the effect of stilbestrol in hypophysectomized adult rats was initiated and is being continued.

A method for estimating the LD<sub>50</sub> of the toxin obtained from clams and mussels was developed, using adult female mice. The preparation of a standard for use in determining the toxicity of shellfish extracts was initiated.

## Pharmaceutical Chemistry Section

An interesting study was undertaken to determine the relationship of the disintegration time of tablets to the availability of the medication contained in the tablet. Human subjects are used in this study with riboflavin (Vitamin B<sub>2</sub>) as the medication, since it is readily determined in urine. Work was continued on a weight variation test for tablets.

Collaborative work was carried out on the assay of propyl thiouracil and propylene glycol with the Association of Official Agricultural Chemists.

## Organic Chemistry Section

A method for rapid, accurate quantitative analysis of narcotics was developed and used for analysis of seizures of narcotics and pharmaceutical preparations containing narcotics or narcotic salts.

Studies on alkaloid identification were extended. Microchemical color and crystal reactions for the identification of new synthetic narcotics were published in the United National Bulletin on Narcotics.

Physico-chemical properties of narcotics have been studied. The ultra-violet spectra and X-ray diffraction patterns of 43 important narcotics were obtained.

The project on the determination of the country of origin of opium, undertaken in collaboration with the Narcotic Commission of the United States, was continued. The data obtained were subjected to a discriminatory function test and it was found that opiums from different countries could be distinguished on the basis of analytical findings.

A study of microchemical methods for identifying barbiturates was begun. A new class color reaction for identifying five substituted barbiturates was found.

### **Biometric Section**

Advice was given to the other sections of the Food and Drug Divisions on the statistical aspects of their work, such as the choice of efficient designs and valid methods of analysis for their experimental investigations.

### **Animal Colony**

There were 19,991 rats bred in the laboratory animal colony and used for experimental work. In addition, 1,150 mice were purchased and used for experimental work as well as 524 other animals including rabbits, guinea-pigs, pigeons, roosters and chicks.

### **Proprietary or Patent Medicines**

The Proprietary or Patent Medicine Act, administered by The Proprietary or Patent Medicine Section, of the Food and Drug Divisions, governs the manufacture and sale of secret formula prepared medicines offered to the Canadian public under proprietary or trade names.

Registration of any drug in this class is compulsory, and a licence must be obtained before the product is placed on the market. The manufacturer submits his qualitative and quantitative formula, stating his therapeutic claims and directions for use. This information is assessed and passed on by medical officers in the Department, and if the article otherwise meets the specifications of the Act registration may be effected.

The sale of all registered preparations is licensed on a year to year basis so that, if experience in use or advances in medical knowledge make it apparent that it is not in the public interest to permit further sale, a licence is refused.

Under this system of dual control by registration and licence, which has been in operation since 1919, worthless as well as harmful products are screened out; promises of cures and false, exaggerated or misleading claims are prohibited. The dosage of potent drugs must be within strictly defined limits; alcoholic preparations must be sufficiently medicated so as to preclude their use as intoxicants. Narcotics, barbiturates, sulphas and prescription drugs are not allowed. Treatments for serious diseases are ruled out.

An Advisory Board of physicians and pharmacologists, appointed by the Minister under Section 9 of the Act, prescribes what shall be deemed sufficient medication of medicines containing alcohol in excess of  $2\frac{1}{2}$  per cent to make them unfit for use as alcoholic beverages; also what shall be the maximum single and daily dose of any drug mentioned in or added to the schedule of the Act. The Board also advises as to the safety of other drugs, and investigates the suitability of unusual combinations.

During the year the registrations of 3,488 preparations were reviewed. One hundred and seventy-four new medicines were examined for registration: 122 were approved and 52 rejected. Two thousand and sixty-two labels, wrappers and newspaper advertisements were scrutinized. In addition, approximately

11,730 radio commercials were reviewed in co-operation with the Canadian Broadcasting Corporation, which requires that all radio announcements dealing with proprietary medicines be submitted and approved before broadcasting. Claims in those continuities which were considered to be false, misleading or exaggerated were marked for deletion or revision.

Samples were secured on the open market and examined as to quality and quantity of drugs and labelling. In this connection the Inspection Service throughout Canada contributed by procuring samples and reporting irregularities in recommendations and methods of merchandising.

Throughout the year manufacturers were interviewed to discuss problems arising out of present requirements, and through these meetings co-operation of the trade has been maintained, resulting in improved standards of proprietary medicines in the interest of the public and in keeping with the spirit and intent of the Act.

Assistance was also extended to the federal, provincial and other officials concerned with the administration of laws and regulations otherwise relating to the sale of such products.

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## NARCOTIC CONTROL

Canada's addict population during the year remained much the same. Officials of the Division of Narcotic Control maintained a maximum of vigilance in all phases of the administration of the Opium and Narcotic Drug Act. Enforcement work, ably carried out by R.C.M. Police officers, showed results in more convictions for offences under the Act and these convictions on the whole drew sterner sentences than were awarded during the year 1950.

Legal transactions on the part of those authorized to undertake them were supervised carefully and no difficulty was experienced with any licensed wholesaler in this regard. Adequate stocks of narcotics were at all times maintained in the country by wholesalers, ensuring complete protection for the sick of the population. The Division continued its policy of close co-operation with the United Nations Narcotic Commission, as also with those countries from which basic narcotic supplies were secured or to which narcotic medication was exported.

In so far as supplies found in the illicit market were concerned, it was again effectively demonstrated that such supplies were the results of illicit imports rather than diversion from legal channels within the country. Heroin on the illicit market was apparently readily available during the year at several urban points, and information reaching the Division was to the effect that prices in the illicit traffic remained sufficiently steady to indicate ample supplies were being smuggled into the country.

Such prices are fantastic when compared with those of legitimately purchased narcotics and can only indicate the desperation of mind and body that must force addicts to any lengths in securing money to enable them to satisfy the addiction habit.

### Legitimate Trade

Canada controls all narcotic transactions by a strict system of licensing. To this end 154 firms were licensed as narcotic wholesalers, and 130 licences to import and 52 licences to export were issued in the year under review. The Opium and Narcotic Drug Act requires that any drug included in the schedule

to the Act, or preparation containing such a drug, no matter how small the drug content, may be brought into the country only on the authority of a licence issued by this Department and, once admitted to Canada, may only be distributed by firms licensed by the Department. Distribution of such supplies is limited to other wholesalers, physicians, druggists, veterinary surgeons, dentists and hospitals on the basis of a signed order and each requisition must be signed by an individual entitled to purchase narcotic supplies and who is in good standing with his respective provincial association or college.

Monthly reports of sales of narcotics and preparations thereof submitted by licensed distributors indicate all such transactions except codeine compounds. Moreover a staff of three pharmacist auditors is constantly engaged in auditing the records and stocks of all wholesalers. These auditors also check security measures at hospitals and government institutions where narcotics in any form are maintained and utilized. A total of 123 wholesale firms were so audited during the calendar year. Nine hundred and ninety hospitals were inspected and 68 special investigations were undertaken by these auditors.

During the year an Order in Council was passed including all synthetic phenanthrene alkaloids in the Schedule to the Opium and Narcotic Drug Act to ensure that an adequate instrument of control would be available as and when synthetic drugs of this nature, possessing addiction properties, made their appearance on the Canadian market.

The volume of imports of the chief narcotics, as also the estimated consumption, are shown in tables 10 and 11, pages 131 and 132.

Revenue to the Department through licences and seizures was \$33,928, while expenditures for legal fees and court costs were \$58,168.

### Crime and Convictions

Of 376 convictions under the Opium and Narcotic Drug Act during the judicial year ending September 30, 1951, 339 were for illegal possession, 29 for unlawful sale or offering for sale, 7 for illegal transportation and one for illegal cultivation of *Cannabis Sativa*. Of the total number of convictions, 337 involved heroin, the remaining cases being divided as follows: morphine, 12; marihuana, 10; demerol, 4; opium, 4; poppy heads, 2; cocaine, 3; and codeine, 4. These statistics provide further proof that illicitly-imported heroin is by far Canada's chief narcotic problem.

In relation to these convictions, the following sentences were imposed:

6 months and less than 1 year .....	145
1 year and less than 2 .....	103
2 years and less than 3 .....	68
3 years and less than 4 .....	28
4 years and less than 5 .....	15
5 years and less than 6 .....	15
6 years and less than 7 .....	1
7 years .....	1

Of those convicted 266 were Canadian, American or British, 9 were Chinese and one was a Yugoslav. It is interesting to note that, of these convictions, only four concerned individuals under twenty years of age, whereas the largest age group was of individuals between the ages of twenty-five and twenty-nine. Included in the above convictions were three relating to professional people, all of whom were nurses. One nurse and one physician were also convicted under the Criminal Code, on charges relating to narcotic matters.

A brief review of two cases would serve to illustrate some of the enforcement problems that confront R.C.M. Police officials, acting on behalf of the Department.

During the month of May 1951, Customs officers in a Quebec town stopped and searched a suspected diamond smuggler entering the country. In a money belt around his waist was found thirty-six ounces of heroin which he was attempting to bring into Canada. This arrest resulted in the smuggler being convicted of a breach of the Opium and Narcotic Drug Act and subsequently sentenced to three years in prison, a fine of \$500 or in default, six months additional imprisonment.

A Vancouver father and two sons who operated a restaurant which was notorious as a gathering place for addicts were arrested when R.C.M. Police officials raided both their place of business and their home. A large quantity of heroin capsules was found. The father was sentenced to four years' imprisonment with hard labour, a fine of \$500 or six months additional, while the sons were each given three-year sentences with hard labour, fines of \$250 or additional three months' imprisonment. These individuals, not themselves addicted to narcotics, had entered the illicit traffic in an effort to reap lucrative profits from this insidious trade. Convictions under the Opium and Narcotic Drug Act during judicial year ended September 30, 1951, are shown in Table 9, page 130.

### **Retail Control**

Druggists, upon request from the Division, continued to supply reports of sales of narcotics to the Department in even greater volume than heretofore and such information provided the opportunity to uncover abnormalities in the use of narcotics and the method of obtaining them, both on the part of known addicts as well as in connection with medical cases and professional personnel faced with a narcotic problem. Approximately 7,500 reports of this nature were checked by the staff of the Division of Narcotic Control during 1951, representing, of course, multiple returns on the part of Canadian druggists.

The Division enjoyed continued co-operation with registrars and senior officials of organizations in both the pharmaceutical and medical fields.

A fifth class of instruction to assist R.C.M. Police officers engaged in drug store inspection work was held during the year under guidance of the Division. Keen interest and appreciation of the practical values of such a class was expressed by the members.

### **International Co-operation**

Every effort was made to ensure that Canada's international obligations in relation to all narcotic matters were maintained. Routine reports and submissions of additional information of international interest were attended to and 61 reports of seizures in the illicit traffic were submitted for the information of the United Nations Narcotics Commission.

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## **PUBLIC HEALTH ENGINEERING**

Departmental interests in the field of public health engineering are concerned with the application of engineering principles so as to influence or control the forces and processes which affect environment in relation to health. The present concept of environmental health presents an ever-widening range of opportunity for greater service in the application of the knowledge and experience of public health engineers. The many and varied activities of the Public Health Engineering Division are carried out by a direct program and

through technical consultation with other agencies concerned with problems of mutual interest in the field of sanitation. Assistance is also rendered to provincial programs sponsored through the General Health Grants administered by the Department.

Functional activities of the Division are directed to those phases of the environment which have a bearing on the health of persons travelling on, and the operating personnel of, railways, vessels and aircraft; persons visiting national parks and other federal property, and those employed there. In addition, the Department is responsible for the enforcement of international requirements governing the handling and shipping of shellfish. Federal legislation authorizing this work is contained in a number of acts, notably the Department of National Health and Welfare Act, 1944, with particular reference to Section 5(a), (d), (e) and (f), the Public Works Health Act and Regulations concerning water for drinking and culinary purposes on common carriers, and the regulations governing the inspection and supervision of the handling and shipping of scallop meat.

Departmental operations also specifically involve the surveillance of water samples on federal property; ice supplies used by railways for chilling food and drink, treatment and disposal of sewage, garbage and other wastes on federal and railway property; sanitation on the right-of-ways of interprovincial and international railways, including stations, bunkhouses, work camps and restaurants; working conditions in federal offices, including questions of lighting, ventilation, and space; and pollution of boundary waters between Canada and the United States.

The conduct of this work, embracing the whole field of engineering practices and treatment methods, involves the use of sanitary surveys and examination of sources of supply, treatment processes and control measures. When requested, designs of sewage disposal plants and water treatment plants are prepared, including the necessary plans, and, in some instances, construction is supervised.

Sanitation problems in the Yukon and Northwest Territories are constantly being referred to this Division for study and advice. Special research has been initiated concerning problems on thermal conditions affecting underground services in perma-frost areas. During the past year assistance was rendered in checking a typhoid epidemic at Gros Cap, on Great Slave Lake. Other problems, such as the disposal of arsenic wastes and the effects of stack fumes, are being carefully watched by the Division's engineers in the far north. Where rapid development is anticipated, the proposed locations of town sites have been examined and other related environmental health strides made. Assistance on water supplies and sewage treatment has been rendered to other agencies and close liaison has been maintained in this field with the federal authorities responsible for administration. Activities associated with the development of the Yukon and Northwest Territories have become an increasingly important phase of the Division's work.

Participation on matters of civil defence has occupied much time and study by engineers of this Division in the preparation of sections dealing with water and sanitation as contained in the department's Civil Defence Health Services manual. Advantage was also taken of an opportunity for several of the division's engineers to attend specialized training courses of a technical nature on civil defence.

Other activities include active co-operation with officials of provincial health departments, the United States Public Health Service and numerous committees and organizations concerned with problems of mutual interest.

Federal departments, such as Fisheries, National Defence, Public Works, Transport, Veterans Affairs, Citizenship and Immigration, and Agriculture, are assisted in problems arising in connection with different aspects of public health engineering. In this regard special mention is made of studies conducted on federal water supplies which have led to the improvement in water quality through the adoption of recent measures for water treatment. Engineering assistance on problems of water supply and sewage disposal for Indian residential schools and hospitals has required increasing attention during the past year. These are but a few of the problems that have occupied the attention of public health engineers.

By agreement between this Department, the Department of Fisheries and the United States Public Health Service, requirements governing the taking, handling and shucking of shellfish for export to the United States have been established and are used as a guide in the administration of control measures in the shellfish industry. Certificates for the export of shellfish are issued when compliance with these requirements is obtained.

The division is actively associated with water pollution problems and pollution control programs. A special investigation was conducted at the request of the Department of External Affairs concerning conditions in Rainy Lake, resulting from discharges from mining operations in Steep Rock Lake. The Public Health Engineering Division is represented by two of its members, recently appointed by the International Joint Commission, on the newly-formed Board of Technical Advisers on Boundary Water Pollution Control. The division takes an active part in the program with the Pollution Control Council, for the Pacific Northwest Basin.

In co-operation with other federal, provincial and United States authorities, consideration is being given to an air pollution problem in the Detroit-Windsor area, which has been referred to the International Joint Commission for study.

Some major activities during the year include 849 sanitary surveys of water supplies, ice supplies, shellfish growing areas, etc.; the collection of 7,111 water samples for analysis; 1,062 examinations of railway property, including stations, bunkhouses, work camps, coach yards and restaurants; and 86 examinations of sewage treatment plants to check the efficiency of operating procedures and control.

The division continued to provide technical consultation services and fulfilled numerous requests for information on problems related to environmental health. During the year a total of ten technical papers were prepared for publication or presentation to technical societies.

Improvements are evident in many fields of environmental health by virtue of the work accomplished by the division during the past fiscal year, although many problems still require attention. The increasing number of requests from other federal departments for professional advice has afforded this division many opportunities for service.

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# WELFARE BRANCH

## I. INTRODUCTION

### Administration

The report of the Welfare Branch reflects the development of Canada's program for the aged. The coming into force of the new Old Age Security Act, the Old Age Assistance Act and the Blind Persons Act to replace the Old Age Pensions Act has added new responsibilities to the department and new administrative functions.

Under the Old Age Security Act, the federal government for the first time assumed full responsibility for pensions for those seventy years of age and over. These payments are subject to a residence qualification, but not to a means test. As the procedures for paying this universal pension are somewhat similar to those of the Family Allowances Act, the administration of the new pensions was assumed by the Family Allowances Division and its regional offices, with the additional title of the Old Age Security Division.

The Old Age Assistance Act provides for pensions, subject to a test of income eligibility, for those sixty-five years and over, the cost to be shared equally with the provinces. Provision for blind persons, which had formerly been included in the Old Age Pensions Act, was made the subject of separate legislation, the Blind Persons Act. This Act also provides for an income eligibility test and for a sharing of the cost with the provinces, with three-quarters of the allowance paid for by the federal government. The administration of these two federal-provincial programs remains with the former Old Age Pensions Division, which is now known as the Old Age Assistance Division. This present report, therefore, includes for the first time sections on Old Age Security, Old Age Assistance, and Blind Persons Allowances, as well as those on Old Age Pensions for part of the fiscal year, and on Family Allowances and Physical Fitness for the whole fiscal year.

The Welfare Branch continued to administer the departmental grant made to assist the eight Canadian schools of social work in relieving the shortage of trained social workers. The grant for the fiscal year was \$100,000. In view of the federal grants to Canadian universities introduced in 1951-52, separate grants by this department to the schools of social work will not be made in the future, except for an interim grant for one year to the Maritime School of Social Work because of special circumstances.

Applications of welfare organizations for incorporation under the Dominion Companies Act were examined by the Welfare Branch at the request of the Secretary of State.

An amendment to the Excise Tax Act, passed in 1950, provided for the exemption from sales tax of public institutions devoted to the care of children, the infirm and the aged, if they were certified by the Minister of Health and Welfare to meet the requirements of the Act. This was in line with the certification of hospitals for exemption, which is carried out by the Health Branch. Sixty-three institutions were certified during the fiscal year. This brings the

total of institutions certified to 303. Eight applications were rejected during the fiscal year because the institutions were unable to meet the requirements of the Act. This brings the total of rejected applications to 137. Five applications have been cancelled or suspended. Institutions have been asked to file periodic returns, indicating whether they are still eligible for certification under the Act.

Research on welfare matters increased during the year. A considerable amount of preliminary research was required for the new legislation on Old Age Security and Old Age Assistance. Work on the Survey of Welfare Positions in Canada, undertaken the previous year at the request of the National Conference on Personnel in Social Work, progressed to the point where an analysis of the returns was begun. The report will be completed in the course of the next fiscal year. Canadian material was also secured for a number of studies undertaken by the United Nations Department of Social Affairs.

Representation was provided to certain interdepartmental committees. These include the Interdepartmental Advisory Committee on Immigration and its Sub-committee on Migration Policy; the Interdepartmental Committee on Social Security; and the Interdepartmental Group on Technical Assistance, which deals with requests for experts and scholarship and fellowship programs under the Colombo Plan and the United Nations Technical Assistance.

The number of social welfare fellowships awarded by the United Nations for study in Canada increased over the previous year. The Welfare Branch arranged programs for Fellows from the following countries: one each from Australia, Belgium, Brazil, Israel, Japan, Sweden and Switzerland, and two each from Finland and India.

The Branch provided Canadian representation to certain United Nations and other international meetings. The Director of Family Allowances, Mr. R. B. Curry, was the Canadian delegate to the seventh session of the Social Commission, held in Geneva from March 19 to April 14, 1951, and was a member of the Canadian delegation to the fourth session of the Inter-American Conference on Social Security held in Mexico City from March 24 to April 8, 1952. The Executive Assistant to the Deputy Minister of Welfare, Mrs. D. B. Sinclair, was the Canadian representative to the International Children's Emergency Fund. She attended the spring meetings of the Program Committee and the Executive Board held in New York, and the autumn meetings of the Program Committee and the Executive Board held in Paris. She served as chairman of the Executive Board for 1951 and 1952.

The main Welfare Branch expenditures were as follows:

	Administration	Net Benefits
Welfare Branch .....	\$ 31,296	
Family Allowances .....	\$1,858,767	\$320,457,673
Old Age Security .....	\$ 498,146	\$ 76,066,834
Old Age and Blind Pensions .....	\$ 91,694	\$ 80,206,025
Old Age Assistance .....		\$ 2,277,238
Blind Persons Allowances .....		\$ 721,449
Physical Fitness .....	\$ 76,723	\$ 152,249
Schools of Social Work .....		\$ 100,000
	<hr/>	<hr/>
	\$2,556,626	\$479,981,468

## II. FAMILY ALLOWANCES

The annual report of the Division for the fiscal year ended March 31, 1951 indicated that a further increase in children, families and expenditures could be anticipated in the next fiscal year. This has proved correct. The number of children on whose behalf family allowances were paid as at March 31, 1952 was 4,530,186, an increase of 162,795 over the previous year. The number of families increased by 56,529, from 1,910,192 to 1,966,721. Total payments for the year rose to \$320,462,000, an increase of \$10,708,145 over the fiscal year 1950-51. The average monthly allowance per child as at March 31, 1952 remained the same as at that date in 1951, namely \$6.00, while the average payment per family rose from \$13.72 to \$13.82.

While the numbers of registrations received both from families already receiving allowances and those applying for the first time were greater than in the previous year, it is interesting to note that the increase in the latter group was considerably larger.

The overall increases mentioned are due partially to the fact that the birth rate in Canada over the past several years has been considerably higher than it was in 1934 and 1935 and thus the number of children receiving allowances for the first time each year remains higher than that of children on whose account payment ceases because of their reaching the age of sixteen. The birth rate, per thousand, was 20.6 in 1934 and 20.4 in 1935, as against 26.8 in 1950 and 27.2 (preliminary figure) in 1951. Another factor that contributed to the increases was the ever-rising number of immigrants to Canada; for example in the calendar year 1950 approximately 17,000 foreign-born children were admitted to Canada, whereas approximately 42,000 were admitted in 1951. Since there is a waiting period of only one year before the children of immigrants to Canada may become eligible for family allowances, the large numbers who entered Canada in 1950 and in the early part of 1951 became eligible for allowances during the past fiscal year.

### Costs of Administration

Notwithstanding a reduction of 6.2 per cent in the number of employees, the administration costs for the fiscal year 1951-52 increased by \$404,069 over the previous fiscal year. This substantial increase was caused partly by the general increase in salaries of civil servants and the rise in the cost of supplies and equipment, and partly by the acquisition of additional space for the expansion and integration of central registries and other administrative services for both Old Age Security and Family Allowances.

A breakdown of the total administrative costs follows:

National Health and Welfare .....	\$1,858,000
Finance—Treasury .....	2,627,335
Public Works .....	234,758
Total .....	\$4,720,093

In relation to the total disbursements of Family Allowances in 1951-52, amounting to \$320,880,854, the administrative costs were 1.47 per cent as compared to 1.39 per cent in the preceding year.

### Staff

As at March 31, 1952, the overall establishment of the Division stood at 694 positions, including 31 vacancies. This represents a reduction (the fourth in as many years) of 46 positions from the previous total of 740 as at March 31, 1951.

The number of permanent positions on strength increased to 428 from 406 in the previous year; however, only 305 of these are filled by permanent employees; this is accounted for by the transfer of several permanent employees to the administration of the Old Age Security program and by the usual turn-over in staff due to retirement, resignation and other causes, while the vacancies were filled in each instance by employees who could not at the time be certified in a permanent capacity. It is expected however that it will be possible in the not too distant future to consider the permanent appointment of a high percentage of the 123 temporary employees now occupying permanent positions. Efforts will also be made to abolish as many as possible of the 31 positions that were vacant as at March 31, 1952. However, it is felt that the time is fast approaching when there will be little, if any, leeway in the overall establishment and the present work-load would indicate that the minimum overall establishment for efficient administration would be in the vicinity of 670 positions.

The introduction of the Old Age Security program necessitated the creation of a number of additional positions in all Regional Offices. These positions, for the greater part, were filled by employees of the Family Allowances Division as the result of promotional competitions, and while these promotions had a very good effect on morale generally, they resulted in a large turn-over in staff, particularly in the lower brackets where recruitment of suitable replacements presented quite a problem. The Department is grateful for the excellent co-operation on the part of the Family Allowances staff (a great percentage of whom were called upon to transfer all or part of their statutory leave to the next fiscal year), and for their willingness in performing so much overtime in the calendar year 1951 in connection with the registration of pensioners under the Old Age Security Act. The transfer of so much statutory leave, together with the accumulation of leave credits for unpaid overtime performed, will have to be borne in mind when considering any reduction in the overall number of positions in the next fiscal year. It is hoped that the use of additional dictating, transcribing and improved indexing equipment, particularly in the larger offices, will alleviate to some extent the pressure on the staff.

The Organization Branch of the Civil Service Commission completed a survey in the Quebec Regional Office in July 1951 and the resulting report recommended an establishment of 183 positions including 136 permanent positions. There remain only the Regional Offices of Toronto and St. John's, Nfld., where such surveys have not been made as yet. It is expected that these will be undertaken in the course of the next fiscal year. Most of the adjustments in staff recommended by the Civil Service Commission in its reports on the surveys of the remaining Regional Offices have already been implemented.

Changes in senior staff during the last fiscal year were: the appointment of Mr. R. H. Parkinson, formerly Supervisor of Welfare Services in the Regina Regional Office, as Chief Supervisor of Welfare Services, and his replacement by Mr. G. P. Allen who previously was the Supervisor of Welfare Services in the Halifax Regional Office. Arrangements for the latter's replacement are already under way. Miss Norma O'Brien was appointed as Regional Director for Yukon and Northwest Territories, replacing Mr. W. F. Hendershot who is now full-time Executive Assistant to the National Director for Family Allowances and Old Age Security.

### **Expansion of Services and Accommodation**

Beginning in July 1951 certain administrative services in the Regional Offices, such as the central registry, the mail and index units, the stenographers' pool and the supply and personnel units, had to be expanded to cope with the

dual requirements of family allowances and old age security; this necessitated acquiring additional space in most Regional Offices. On the other hand, the problem was minimized to some extent through the destruction of a large number of terminated Family Allowances files for the years 1945 to 1948 inclusive, for which action appropriate authority had been obtained. This move also made available a number of filing cabinets in the central registries of the Regional Offices.

Quarters in the new federal buildings in Victoria and Fredericton were provided for the Regional Offices in those cities towards the end of the fiscal year and arrangements are at present under way for the Regional Office in Regina to be moved to more suitable accommodation in the federal Income Tax building in that city. It could be said, therefore, that, with the exception of Toronto and Winnipeg, where accommodation is not altogether suitable, all offices are now adequately housed.

### Overpayments

The last fiscal year has seen the largest reduction in overpayments of family allowances since the peak in February 1948 when total overpayments stood at \$506,734. As at March 31, 1952 outstanding overpayments for the entire period since the inception of Family Allowances in July 1945 totalled \$371,708 as compared to \$438,401 a year ago; a net reduction of \$66,693, or a net reduction of \$135,026 since the peak in February 1948.

The notable overall decrease in overpayments since March 31, 1951 is due to the substantial drop in new overpayments discovered and set up during the fiscal year, i.e. from \$449,644 to \$310,660 (see Table 27, page 148). The greater percentage of overpayments set up during the year were recovered currently by deductions from continuing Family Allowances accounts while the remainder are recoverable by collection from the parents. It follows therefore that total collections on account of overpayments during 1951-52 were substantially lower than in 1950-51; i.e. \$377,353 as compared to \$462,417.

There are varying causes for overpayments, the principal ones being: (a) children working for wages, (b) children not in attendance at school, and (c) non-maintenance by the parents. All three account for roughly 70 per cent of all new overpayments set up. Every possible effort, by way of public information, direct correspondence and otherwise, is made to prevent overpayments arising and equal efforts are made to reduce them once they have occurred.

The sum of \$371,708 outstanding as at March 31, 1952 is made up as follows: (a) \$76,702 or 20.7 per cent, which is being recovered currently from active accounts; (b) \$184,569 or 49.7 per cent, which is recoverable from parents whose accounts have terminated, and (c) \$110,437 or 29.6 per cent, which is considered uncollectable (see Table 25, page 146). When considered in relation to the \$1,900,000,000 paid in Family Allowances since July 1940, the amount of overpayments outstanding is extremely small.

### Birth Verification

A review of Table 28, page 150, will show that the number of unverified births increased from 116,569 as at March 31, 1951 to 137,949 as at March 31, 1952. Normally, the number of unverified births at any time should not be more than 125,000, provided the monthly birth indices prepared by the Dominion Bureau of Statistics are supplied to the Regional Offices not later than four or five months following the month of birth for which they were compiled. In the past fiscal year, there has been considerable delay in the supply of

monthly birth indices (in some offices as much as ten months) which was occasioned by the heavy burden placed on the Dominion Bureau of Statistics in computing and finalizing the results of the 1951 Census. Assurance has been given, however, that this situation is temporary and that the flow of monthly birth indices will return to normal in the not too distant future. Otherwise, birth verification no longer presents a problem.

### **School Attendance and Employment for Wages**

Allowances are payable, under the Family Allowances legislation, only if a child's attendance at school is satisfactory in accordance with the laws of the province where he resides and, if over school age, he is not working for wages. During the fiscal year 1951-52, allowances for 38,709 children were suspended because of unsatisfactory attendance at school or employment for wages, as compared with 36,845 in 1950-51.

It is rather difficult to determine the exact causes of this increase, since conditions vary from province to province. The school-leaving age differs among provinces; arrangements for the reporting of unsatisfactory school attendance by provincial and local school authorities vary considerably from one province to another, those reached in some cases being considerably better than in certain other cases; more complete reports of children working for wages are received by some Regional Officers than by others; opportunities for employment show a marked difference from one area to another.

Certain general conclusions may be drawn, however. Arrangements for obtaining information regarding both unsatisfactory school attendance and "employment for wages" have improved generally; parents are becoming more and more familiar with the requirements and are voluntarily reporting in a larger number of cases; the use of a special questionnaire by Regional Offices, described in the Annual Report for the previous fiscal year, has become more widespread; and, finally, the school enrollment across Canada continues to increase, it being borne in mind that the Canadian birth-rate rose in the immediate post-war years, the peak being reached in 1947.

Again during the past year, indications were that the loss of family allowances is one of the most effective deterrents to unlawful absences from school and to juvenile work.

### **Separation Allowances, Navy, Army and Air**

During the past year the Division agreed, at the request of the Department of National Defence, to assist in the checking of application forms received from service personnel in connection with the increased rate of separation allowances. These forms are received in Regional Offices under cover of nominal rolls. The claimed birthdates of children are checked with Regional Office records and the forms marked accordingly. In addition, information is placed on the form as to whether the serviceman's wife is in receipt of family allowances. The forms are then returned to the Department of National Defence.

At the outset, this undertaking was quite onerous, as there was some backlog of forms to be checked, but as at March 31, 1952, this work was on a more or less current basis.

### **Prosecutions**

When \$320,880,854 in Family Allowances is distributed annually to 1,966,721 families on the sole basis of an application filled out by the person desiring the allowance, it is gratifying that there has been so little fraud.

When Family Allowances were first put into pay, the best methods for uncovering cases of fraud were not known, and it was only after experience that adequate procedures were devised. As a result, a backlog of cases built up through this early period.

When it became obvious that criminal proceedings would have to be initiated, procedures were laid down for prosecutions and the first criminal action was started in May 1947. As methods improved, the number of cases ready for prosecution grew, and it is for this reason that the number of prosecutions each year has increased steadily since May 1947. The backlog of cases which built up in the early years has nearly been disposed of and at the end of the next fiscal year a sharp drop in the number of prosecutions is expected.

Since May 1947, there have been 184 prosecutions initiated of which 136 were successfully completed, 19 were abandoned and 29 are pending. In one case, the person prosecuted was acquitted. In six cases, action was taken for fraud under the provision of the Criminal Code; the remainder of the prosecutions were for infringement of the Family Allowances Act and were, for the most part, for the following reasons: non-maintenance—45 cases; duplicate accounts—29 cases; fictitious children—27 cases; and deceased children—13 cases.

During the fiscal year ended March 31, 1952, 92 prosecutions were initiated, of which 55 resulted in convictions, 12 were abandoned, and 25 are pending.

The sentences given were fines, imprisonment, or both, with fines being imposed in the majority of cases. Up to January 31, 1952, \$10,160 has been paid in fines and \$21,806 recovered on overpayments as a result of this action. The total amount of overpayments arising out of cases of fraud in which action was taken was \$42,238.

Not only successful prosecutions but also thorough investigations by the Royal Canadian Mounted Police contribute to the effectiveness of criminal proceedings as a deterrent in preventing fraud. The two together no doubt account for there having been so few cases of fraud in the seven years that Family Allowances have been paid.

### **Transfers of Accounts between Provinces**

Transfers of Family Allowance accounts from province to province reached an all-time high in the past fiscal year; a review of Table 30, page 152, will indicate that, as has been the case in previous years, there is a larger number of persons entering the provinces of Ontario and British Columbia than are leaving those provinces. It is interesting to note that this influx of population was quite prevalent in the province of Alberta until the fiscal year just ended during which 45 more families moved out of the province than in. With the exception of the province of Quebec, where transfers in and out were about equal, the remaining provinces continued to show an outward trend in the movement of families; the most marked being in Saskatchewan and New Brunswick, followed by Nova Scotia and Manitoba. (It should be noted that the figures in Table 30, page 152, refer only to families in receipt of Family Allowances.)

### **Conferences**

During the fiscal year a special conference of Regional Directors of Family Allowances was held in Ottawa. The main purpose of this conference was to acquaint Regional Directors with the broad lines of policy in respect to the introduction of the Old Age Security program and on the setting up of the appropriate procedure for the initial registration of pensioners under the legislation; however, policy, methods and procedures in respect of Family Allow-

ances were also discussed with a view to more uniformity in interpretation and application of policy and for improvement in the general administration of the Family Allowances program.

## **Welfare**

During the fiscal year 1951-52 a total of 18,900 cases involving social problems were referred to the Welfare Sections in the Regional Offices. Most of these cases are brought to attention by the families themselves and by the public and private agencies throughout the country, whilst the remainder are referred by private individuals or originate in the administrative units of the Regional Offices during the process of studying eligibility.

The types of problems involved are, in order of frequency, as follows: (a) those growing out of the break-up of the home and where both parents claim Family Allowances; (b) changes in custody of the children; (c) chronic non-attendance at school caused by social problems; (d) misuse of Family Allowances; and (e) other miscellaneous social problems in relation to Family Allowances.

Social Workers in the Regional Offices review each case referred and make a recommendation as to the action to be taken, such as a change of payee, the appointment of an administrator or the referral to a welfare agency for casework service. Of the total number of cases dealt with in the fiscal year 1951-52, slightly more than 4,000 necessitated a "change of payee", 180 required the appointment of an administrator, 640 were referred to a social agency for "casework service", 8,200 necessitated some other type of administrative action and 6,400, or almost one-third, required no change.

A very important feature in so far as the welfare side of the Family Allowances program is concerned is the work involved in the appointing of administrators where it is discovered that Family Allowances are being misused. This is an area where the skills of the social workers can be used to advantage. While the actual cumulative number of accounts under administration, 463, is extremely small compared to the total number of accounts in pay, the appointment of the administrators in these cases represents a good deal of work. In all such cases a complete case history is secured, either from a social agency in the community or from one of the trained social workers employed in the Regional Offices. In each instance the report is carefully evaluated so as to be completely fair to the parent. It is only as a last resort and where no other solution appears workable that a recommendation is made to have an administrator appointed. Wherever possible it is the desire of the Division to continue to pay Family Allowances to the mother.

While it has been necessary in some areas to have investigations made by Family Allowances social workers, the general policy has been to seek the co-operation of local agencies, both public and private, and they have given extensive and invaluable service. In the fiscal year ended March 31, 1952, 2,499 such investigations were made through the Provincial Departments of Welfare and 1,312 through other welfare agencies.

This year has witnessed a further growth in the number of children for whom Family Allowances are being paid to child-caring agencies. During the year Family Allowances were paid to such agencies on behalf of some 40,000 children. These agencies are paid Family Allowances as a "parent". However, a measure of control is retained by this administration with regard to how the moneys are to be spent. In general an agency is permitted to spend up to \$4.00 per month in order to procure or retain a good foster home. That portion of the child's allowance which remains is placed in a trust account and may be used to provide extras for the child which are not normally provided by the agency.

### III. OLD AGE SECURITY

#### Introduction

There have been a number of developments over the past twenty-five years which have reflected an increasing awareness of the needs of the senior citizens of this country. Most notable was the Old Age Pensions Act of 1927 which provided pensions to persons seventy or over through federal-provincial partnership and co-operation. Through the years a series of amendments to the original legislation extended the benefits and coverage of the Old Age Pensions Act with the result that this measure has made an important contribution to the well-being of the country's aged citizens.

An all-party parliamentary committee was established in 1950 to study the problems of Old Age Security. This committee unanimously recommended to Parliament that a pension of \$40.00 a month should be paid to all persons seventy years of age or over, with eligibility for the pension to be based solely on age and a suitable residence qualification. The Old Age Security legislation was designed to implement this recommendation of the parliamentary committee.

The Old Age Security Act embodies features which place this legislation in an outstanding position in comparison with similar programs throughout the world.

Most significant is the fact that the Old Age Security Pension is a *universal* pension. In some countries certain occupational groups are excluded entirely while other persons receive restricted benefits related to the number of contributions they have made over the years. The Old Age Security Act provides for a pension to *all* persons seventy years of age or over who meet the residence requirement.

The Old Age Security program has also been designed for simplicity of administration. This is made possible not only by the universal coverage feature and the absence of means test requirements but by the method of meeting the costs of the pension. In those countries where benefits are related directly to contributions from the individual and from the employer, effective administration requires the maintenance of a large volume of records. Under the Canadian plan there is no necessity to keep a record of the individual contributions in relation to benefits since the cost of Old Age Security Pensions is considered as a charge on the nation's current production and is covered through moneys received from sales tax, income tax and tax on corporate profits.

#### Historical Review

In the early months of 1951 it was announced that the Government intended to bring before Parliament legislation to provide for an Old Age Security Pension to be paid beginning January, 1952. The Family Allowances Division, which administers the Family Allowances Act, was assigned the responsibility of setting up the necessary machinery to administer the proposed legislation. The Regional Family Allowances offices, located in the capital city of each province, became the regional offices for the Old Age Security program as well. The Family Allowances organization lent itself readily to the addition of the Old Age Security work since many of the operations involved in Old Age Security are similar to those in the Family Allowances administration.

One of the first problems to be faced was to arrange for the initial registration of applicants for the pension. It was estimated that there would be approximately 675,000 persons seventy years of age or over in Canada as of December 31, 1951, and of this group some 300,000 were already receiving a pension under the Old Age Pensions Act. It was decided, therefore, to arrange first for the transfer of persons receiving a pension under the Old Age Pensions Act, to be followed by registration of persons who had not been in receipt of the Old Age Pension.

During the month of July, 1951, the names of persons in receipt of Old Age Pensions were placed on tentative Old Age Security rolls so that payment of Old Age Security Pension could begin promptly with the month of January, 1952. The work of transferring these names was carried out by teams made up of Old Age Security Administration and Treasury representatives who checked each file held by the provincial authority to see that the eligibility requirements for the Old Age Security Pension had been met. This work was greatly facilitated by the co-operation received from the provincial authorities in all provinces. Immediately after this tentative transfer of pensioners from the Old Age Pensions' rolls had been completed, the persons concerned were notified that they would receive the Old Age Security Pension effective January, 1952, and that no action by them regarding application for such pension was necessary.

In July, 1951, an intensive publicity campaign was begun with the object of securing applications from those persons who would be eligible for an Old Age Security Pension by January, 1952, but who were not already in receipt of a pension under the Old Age Pensions Act. Application forms were placed in all post offices throughout Canada and every effort was made to have applicants send in the completed application form to the appropriate Regional Director as soon as possible. Through the media of newspapers, posters, and radio, the necessity for early registration was stressed. In all the advertising it was pointed out that early application would help to avoid delay in payment which was to begin at the end of January, 1952. The results obtained by this publicity were excellent. By the end of September, 1951, 250,000 application forms had been received in the regional offices. Applications continued to come in steadily during the rest of the year and at the end of December, 1951, applications had been received from 342,169 persons.

The Old Age Security Act received Royal Assent on December 21, 1951, and the Old Age Security Regulations came into effect December 28, 1951. The first payment of Old Age Security Pensions was made at the end of January, 1952, when 617,600 pensioners were paid the amount of \$24,704,000. They included 308,310 persons who had been transferred from Old Age Pensions' rolls and 309,290 persons who had applied directly for an Old Age Security Pension.

## Staff

The staff requirements for Old Age Security Pensions have been greatly influenced by the fact that the administration of Old Age Security is carried out jointly with the Family Allowances administration. The National Director of Family Allowances acts also as Director of Old Age Security and each Regional Director of Family Allowances has assumed also the duties of Regional Director of Old Age Security. Wherever possible Family Allowances services have been used for Old Age Security, as for example, in mail reception, central registry, stenographic pool and welfare services. In some cases it

has been necessary to add to the staff of these sections in order to handle the extra work. Nevertheless, the number of extra staff was much less than the number that would have been required for an independent establishment.

Another factor in determining the staff requirements was the decision to use Family Allowances and Old Age Security personnel extensively in overtime work on Old Age Security administration during the period of initial registration. In the Toronto office alone the overtime between July 1, 1951, and March 31, 1952, amounted to 28,466 hours for Family Allowances personnel and 3,629 hours for the Old Age Security staff. A corresponding amount of overtime was worked in the other regional offices.

Because of the use of joint services with Family Allowances administration and the overtime work by Family Allowances and Old Age Security personnel, the number of new employees required was relatively small. There was a total of 123 continuing positions added to the establishment of the regional offices. This compared with 694 established positions of a similar character required for Family Allowances. In addition, in some provinces it was found necessary to employ casual help to assist in the processing of the large bulk of applications received early in the Old Age Security program. The number of continuing employees and casual help for each province, as of March 31, 1952, is shown below.

<i>Province</i>	<i>Continuing Establishment</i>	<i>Casuals</i>
Newfoundland .....	5	0
Prince Edward Island .....	3	0
Nova Scotia .....	8	2
New Brunswick .....	7	2
Quebec .....	25	0
Ontario .....	31	28
Manitoba .....	10	0
Saskatchewan .....	10	4
Alberta .....	10	0
British Columbia .....	13	3
Yukon and Northwest Territories .....	1	6
	<hr/> 123	<hr/> 45

### **Accommodation and Equipment**

The introduction of the Old Age Security program made it necessary to acquire some additional space and equipment for the regional offices. In a number of the regional offices, additional space was obtained in the same building in which the regional office is located. This was the situation in St. John's, Halifax, Quebec City, Regina and Edmonton. In Toronto, additional space was obtained in an adjoining building. It was necessary to secure separate quarters for Old Age Security work in both Fredericton and Victoria. No additional space was obtained for the Charlottetown and Winnipeg offices. However, by the end of March there were indications that the present space in the Winnipeg office would not continue to be sufficient to accommodate the extra staff and equipment needed for the Old Age Security work.

### **Eligibility Requirements of Old Age Security Legislation**

The Old Age Security Act and Regulations provide for the payment, on application, of a pension of \$40.00 per month to a person who is seventy years of age or more and who meets the residence requirements. There is no means test qualification. Therefore, the two factors of eligibility which must be established concern age and residence.

## Proof of Age

Before an application for Old Age Security Pension can be approved for payment it is necessary to have satisfactory evidence that the applicant is seventy years of age or more.

There are a number of ways by which an applicant may prove his age. A birth or baptismal certificate is considered the best evidence but where this type of proof is unavailable the Department is prepared to consider a wide variety of other kinds of evidence. Consideration is given to such items as marriage certificates, insurance or government annuity certificates, communion certificates, confirmation records and other church records, passports and naturalization documents, immigration records, pension and superannuation records, employment records, educational documents, newspaper and magazine clippings, letters, photographs, medical documents, public records, military service records, homestead records, membership records, family Bible and other privately-kept records.

If the applicant is unable to present any type of evidence whatever, he is asked to complete a form authorizing the Regional Director to obtain a search of the census records. Through the co-operation of the Bureau of Statistics it has been possible to assist many applicants to prove their age by reference to the census records. Also, arrangements have been made with the Department of Labour whereby the Old Age Security Division can request a search of the 1940 National Registration records for verification of age. This source has helped many applicants who lack other suitable evidence.

At the beginning of the Old Age Security program there was some concern regarding the difficulty which might be faced by a number of applicants in obtaining satisfactory evidence of age, particularly since many births which took place seventy or more years ago were not registered with the provincial authorities. It has been the policy of the Division to assist applicants in every way possible to prove their age. The measure of the success of this policy may be seen in the relatively small number of applications which have been deferred for lack of proof of age. Reference to Table 31, page 153, will show that as of March 31, 1952, the total number of deferred applications relating to payment for January and February, 1952, is only 2,389 out of a total of 341,112 direct applications for the pension. Not all of the deferred applications are for lack of satisfactory proof of age. In some cases there is a problem regarding residence or some difficulty in obtaining a satisfactorily completed application form.

## Residence

To be eligible for the Old Age Security Pension the applicant must have resided in Canada for the twenty years immediately preceding the day on which the application is approved, or failing that, the applicant must meet the following requirements:

- (a) presence in Canada prior to the last twenty years for an aggregate period at least equal to twice the aggregate periods of absence from Canada during those twenty years, and
- (b) residence in Canada for at least one year immediately preceding the day on which the application is approved.

The application form for Old Age Security Pension has several questions relating to residence. The applicant is required to give a history of residence in Canada and of absences from the country. In addition he is asked to give the names and addresses of two persons, not members of his family, who have

knowledge of the facts of residence as stated by the applicant. Applicants who were born outside Canada must state the date and place of entry to Canada.

In most cases applicants for the pension have been living in Canada for a sufficient length of time to meet the residence requirements. It has been found necessary to disallow the claim for pension on the grounds of residence in a relatively small number of cases. In many of these cases it will be possible to approve the application at a later date when the residence requirements have been met.

### **Administration of Pension**

The Old Age Security legislation provides that the pension cannot be assigned, transferred, or pledged to meet a debt. The Act and Regulations also limit the authority of the departmental officials very narrowly with respect to their right to take control of the pension cheque away from the individual and make it payable to someone else.

In accordance with the legislation the pension is paid directly to the individual pensioner as a matter of right, to be disposed of by him on his own responsibility, except in those cases where, because of illness, infirmity, or some other reason, it can be shown that the pensioner is incapable of managing his own affairs. Such reasons as indigency or receipt of maintenance from public funds are not considered sufficient cause to pay the pension to another person or agency on behalf of the pensioner. In order to establish the incapability of the pensioner to manage his own affairs it is necessary to receive satisfactory evidence from a doctor, clergyman or lawyer who has been handling the affairs of the pensioner. Where satisfactory evidence of incapability is produced the Director may pay the pension to an administrator, to be expended for the benefit of the pensioner.

The number of Old Age Security cheques paid to administrators in March, 1952, was 22,820, which is 3.5 per cent of the total of 643,013 cheques issued in that month.

### **Welfare**

It is expected that in the administration of Old Age Security Pensions there will be welfare problems of a somewhat different nature than those involved in the Family Allowances program. The social work staff now employed in the welfare section of the Family Allowances office is also being used for Old Age Security work. Future staff requirements will be determined on the basis of the work-load as it develops.

One area where professional social workers are of great assistance is in the assessment of requests to have the pension paid to a person other than the pensioner. The social worker is able to go behind the original request and determine whether the pensioner is actually incapable of handling his own affairs or whether the request is merely made because someone is of the opinion the pensioner is mispending his money or because someone is interested in getting at least a part of the proceeds of the pensioner's cheque. In the light of the policy that the cheque is to be paid to the pensioner unless incapability is shown, it is felt the use of social workers in this area will help to uphold the interests of the pensioner.

Another phase of the program in which the skills of social workers are being utilized is in the liaison with institutions caring for older persons. It is felt that social workers can best interpret policy to institutions of this kind. Also, because of their understanding of people, they will be most appreciative of the problems faced by the administrators of such institutions.

It is expected that numerous requests for services not provided by this Department will arise. When this occurs the regional office social work staff will make the necessary referrals to social agencies who are equipped to assist with the particular problem raised.

### **Estates of Deceased Pensioners**

Under the Old Age Security legislation the pension is payable for the month in which the pensioner dies. Since the Old Age Security cheque is issued at the end of each month, in the event of death there is nearly always a cheque which remains uncashed by the pensioner. This cheque is returned to the issuing office and steps must then be taken to determine the proper person to whom the cheque should be reissued. In each case it is necessary for the Regional Director to ascertain whether there was a will or administration of the estate. If it is found that there is an executor or administrator the cheque is made payable to the estate of the late pensioner. Where there is no executor or administrator the Regional Director must designate a person or agency to receive the cheque on behalf of the deceased pensioner. In many cases this procedure involves considerable correspondence and investigation before final disposition of the cheque can be made. An indication of the amount of work involved in this area may be seen by reference to Table 31, page 153, showing a total of 4,325 deaths reported in the month of March, 1952.

### **Indians**

A noteworthy feature of the Old Age Security legislation is the fact that Indians are eligible to receive the Old Age Security Pension on exactly the same basis as other persons. This is in keeping with policy in other areas whereby the Indian is given the same rights and privileges as other Canadians.

Indians were excluded from the benefits of the Old Age Pensions Act but the Department of Citizenship and Immigration did pay an allowance to aged Indians who were seventy years of age or over and who met certain other requirements. Arrangements were made with the Department of Citizenship and Immigration whereby approximately 4,200 persons who had been in receipt of the Allowance to aged Indians were transferred to a pension under the Old Age Security Act without the necessity of requiring these persons to complete the usual application form.

### **Application for Persons Receiving Old Age Assistance**

The Old Age Assistance Act provides payment of a pension to persons who have reached the age of sixty-five or over and who meet the other eligibility requirements. Arrangements have been made with the provincial authorities so that, when the pensioner approaches seventy years of age, the province makes application for the Old Age Security Pension on behalf of the Old Age Assistance recipient. This provides continuity of payment and relieves the pensioner from the necessity of completing the usual Old Age Security application form.

## Costs of Administration

The following table shows the administrative costs of the Old Age Security program for the fiscal year 1951-52:

Administrative Costs	1951-52
Department of National Health and Welfare .....	\$ 478,000
Department of Finance (Treasury) .....	\$ 304,223
Department of Public Works .....	17,782
Total .....	\$ 800,005
Total Net Old Age Security Payments	
January-March, 1952 .....	\$76,066,834
Percentage of Administrative Costs Compared to Old Age Security Payments .....	1.05%

It should be noted that the administrative costs for the period under review are abnormal because of the mass load of registration and the consequent necessity for extensive overtime work and employment of casual labour. It should also be noted that, whereas the administrative costs are related to the nine months from July, 1951, to March, 1952, the Old Age Security payments are only for three months, January, 1952, to March, 1952.

## Conclusion

The reception and approval of a large number of applications for the Old Age Security Pension has been a heavy administrative task. The success of this initial phase of the program has been made possible only because of outstanding work on the part of regional office personnel and District Treasury Office staff.

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## IV. OLD AGE PENSIONS

### Changes in Pension Scheme

Extensive changes were made in the scheme for paying old age pensions provided for by the Old Age Pensions Act, following the recommendations made by the Parliamentary Committee on Old Age Security referred to in the report for the last fiscal year. The recommendations were that persons seventy years of age or over who fulfilled certain residence requirements be paid a pension of \$40 a month by the federal government and that assistance of \$40 a month, subject to an eligibility test, be provided for persons over the age of 65 not eligible for the universal pension, the cost to be shared equally by the federal and provincial governments.

The first recommendation was brought into effect by The Old Age Security Act and the second by The Old Age Assistance Act. At the same time that Parliament passed the latter Act, provision was made by a separate Act, entitled The Blind Persons Act, for the payment of allowances, subject to an eligibility test, to blind persons over the age of 21 years. Since 1937 the Old Age Pensions Act had provided for the payment of pensions to blind persons, the federal government paying, as in the case of old age pensions, 75 per cent of the cost and the provinces paying the remaining 25 per cent. This basis was continued for paying the cost of allowances under The Blind Persons Act. The three new Acts came into operation on January 1, 1952.

### Operation of Old Age Pensions Act Concluded

After being in force for almost twenty-five years the Old Age Pensions Act ceased to operate on December 31, 1951, so far as federal payments to the provinces were concerned. By that date the federal government had paid out, as federal contributions to the provinces for old age pensions and pensions in respect of blindness, more than \$800,000,000. The total of the federal and provincial shares, not taking into account supplemental allowances provided by certain provinces, was more than \$1,000,000,000. Up until 1931 the cost of pensions was shared equally by the federal and provincial governments. By an amendment to the Act in that year the federal government assumed responsibility for 75 per cent.

The maximum pension provided for in the original Act was \$20 a month. This amount was increased to \$25 in 1943, to \$30 in 1947 and to \$40 in 1949. During the same period the maximum income allowed, including pension, rose from \$365 a year to \$600 for an unmarried person and from \$730 to \$1,080 for a married couple. Higher amounts were allowed for blind persons and sighted persons with blind spouses.

Persons of seventy years and over who were in receipt of pensions under the Old Age Pensions Act as at December 31, 1951, were automatically taken over by the administration of The Old Age Security Act as from January 1, 1952. As at December 31, 1951, there were 308,825 persons receiving old age pensions and 11,335 receiving pensions in respect of blindness. Of the total number of blind pensioners, 3,212 aged 70 and over were transferred to the administration of The Old Age Security Act and the remainder taken over by provincial administrations as recipients of allowances under The Blind Persons Act.

The provinces had to deal with a number of cases where applications for pension under the Old Age Pensions Act made prior to December 1, 1951, had not, for one reason or another, been completed. To ensure that such cases

could be handled in the normal way, The Old Age Security Act provided for the repeal of the Old Age Pensions Act on a day to be fixed by proclamation of the Governor-in-Council. The Act had not been repealed as of March 31, 1952.

### **Old Age Assistance**

The plan for paying old age assistance follows the lines of the plan for paying pensions under the Old Age Pensions Act. The income requirements, however, are more generous. Under The Old Age Assistance Act the maximum income allowed in the case of an unmarried person is \$720 a year and in the case of a married person, \$1,200 a year. The maximum assistance to which the Government of Canada is authorized to contribute is \$40 a month. Residence for the twenty years immediately preceding the date of the proposed commencement of pension is required, with provision being made in both the Act and the regulations for certain cases where there was an absence from Canada within the twenty year period.

By March 31, 1952, or shortly after that date, all provinces and the Northwest Territories had entered into agreements with the Government of Canada under the provisions of The Old Age Assistance Act. Ten of the agreements were effective from January 1, 1952, the one with Newfoundland coming into operation from April 1, 1952. The maximum assistance specified by the provinces in their agreements was \$40 a month except in the case of Newfoundland which specified \$30 a month. The Government of the Yukon Territory had not made an agreement under the Act.

The federal contribution for old age assistance is payable monthly. During the months of January, February, and March, 1952, the provincial authorities were unable to deal with applications on a current basis and consequently the amounts paid out for each of the three months do not give an accurate indication of the ultimate extent of operations under the Act. Federal contributions to the provinces for January amounted to \$386,613.12, for February, \$776,988.52, and for March, \$1,113,636.85, making a total for the last three months of the fiscal year of \$2,277,238.49. The number of recipients as at March 31, 1952, was 41,601.

### **Allowances for Blind Persons**

Allowances under The Blind Persons Act are handled in practically the same way as were pensions in respect of blindness under the Old Age Pensions Act. The age requirement of 21 years is the same, but the residence requirement of 20 years has been reduced to 10 years. The amounts of maximum income allowed, including the allowance, have also been increased being \$840 a year for a single person and \$1,320 a year for a married person. In the case of two blind spouses, the amount is \$1,440. The amounts under the Old Age Pensions Act were \$720, \$1,200 and \$1,320.

Separate agreements under The Blind Persons Act have been made by the Government of Canada with the governments of the ten provinces and the Northwest Territories. All agreements were effective from January 1, 1952, and provide for the payment of a maximum allowance of \$40 a month. The Government of the Yukon Territory has not entered into an agreement but has continued to pay, under the authority of the Act, two (2) blind persons granted pensions in respect of blindness under the Old Age Pensions Act.

For the last three months of the fiscal year 1951-52, federal contributions totalled \$721,449.24. The monthly amounts varied little, being \$239,729.92 for January, \$240,905.41 for February and for March \$240,813.91. The total number of recipients as at March 31, 1952, was 8,079.

Tables 32 and 33 (page 154) show the amounts paid by the Government of Canada to the provinces and to the Yukon Territory for old age pensions and pensions for blind persons under the Old Age Pensions Act to March 31, 1952—also amounts paid by the Government of Canada to old age and blind pensioners in the Northwest Territories.

Tables 34 and 35 (page 155) show statistics as of December 31, 1951, the date on which regular quarterly contributions by the government of Canada under the Old Age Pensions Act were discontinued.

Table 36 (page 156) shows the amounts paid for old age assistance by the Government of Canada to the provinces during the last three months of the fiscal year, and relevant statistical information.

Table 37 (page 156) shows the amounts paid for blindness allowances under The Blind Persons Act to the provinces, the Yukon Territory and the Northwest Territories during the last three months of the fiscal year, and relevant statistical information.

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## V. PHYSICAL FITNESS

The Physical Fitness Division continued to act as the agency for administering the fitness and recreation services made available under the terms of the National Physical Fitness Act. The position of National Director remained vacant during the current fiscal year.

During the fiscal year 1951-52, in accordance with agreements entered into by the provincial departments concerned, the Provinces of Alberta, British Columbia, Manitoba, New Brunswick, Nova Scotia, Ontario, Prince Edward Island, Saskatchewan and the Northwest Territories co-operated with the federal government under the terms of the National Physical Fitness Act.

Initiated on a limited basis in 1944, provincial fitness and recreation services have been broadened each year to include a wider variety of activities. The steady increase in citizen demands for opportunity to participate continues in all aspects of Fitness and Recreation programs. There has not been a comparable increase in the provision of facilities and specialized program services to meet these demands.

### Administration

The Division continued to provide a variety of professional consultative and informational services for the assistance of provincial government departments and national organizations. It acted as a clearing house for the dissemination of information on recreation, fitness, physical education, community centres, drama, sports, the organization and administration of community and specialized programs, and related matters. The actual organization and direction of recreation and fitness projects continued to be a provincial and local responsibility and consequently the Division did not operate an activity program. Close liaison was maintained with other countries and with the Commonwealth in particular, thus facilitating an exchange of publications and information on the latest developments abroad.

During the fiscal year 1951-52, a total of \$152,249.71 was paid in respect of assistance to the provinces under the terms of the Act. Of this sum, \$83,636.70 was paid in respect of claims submitted for the fiscal year 1950-51. Claims have yet to be received from the provinces of Ontario, Manitoba and the Northwest Territories for grants in respect of the fiscal year 1951-52.

The total sum available for the administration of the Division during the current fiscal year was \$110,388.15; and of this amount the sum of \$77,085.00 was expended, leaving an apparent balance of \$33,302.31. These amounts are not subject to the provisions of "The Consolidated Revenue and Audit Act", and therefore do not lapse at the end of the fiscal year. The balance has already been committed and for the greater part will be expended during 1952-53 on projects started during the fiscal year 1951-52.

It will be noted that the total provincial expenditures on Fitness and Recreation programs during the fiscal year amounted to \$825,237.22. This sum includes the amount of the Federal Grants made to assist the provinces. The net provincial expenditure was \$669,417.95 which, in all but three cases, exceeded that which was necessary to match the federal grant. In six out of the nine participating provinces, provincial expenditures have increased since the previous financial year.

Demands on the services of the Division during the fiscal year have indicated a definite increase in activity in a number of special fields, such as recreation for young children and older age groups, institutional programs and employee recreation. These particular aspects of recreational services require

specialized services. At present there is a lack of trained personnel in the recreation field. To some extent this scarcity is due to the lack of security and professional recognition as compared with that existing in relation to the older professions, such as education and public health.

### Informational Materials

Information relevant to fitness, recreation, physical education, cultural activities, community centres, reports on new projects and research in Canada and other countries, new procedures and developments, have been issued in bulletin form to Council members, interested organizations and individuals. In all, 159 subjects in the English language were prepared, and 41 subjects in the French language. The distribution of informational materials for 1951-52 was: Duplicated materials—88,227 (English) and 6,419 (French); printed materials—29,968 (English) and 9,079 (French) making a total of 133,693 copies both printed and mimeographed, English and French.

Some of the more important publications and reports produced by the Division during the year were: *Here's How To Do It*—Supplement No. 1, (English only); *Prelude to Performance*, *Simplified Staging* (French only); *Hockey Coaching*, *Play for Preschoolers*, *Posture's Important When You're in Your Teens*, *Simplified Stage Lighting*, *Let's Co-operate for the Good of Sport*, *National Survey of Recreation in Canadian Communities*, *A Citizen's Committee in Action*, *Proceedings—Professional Schools Conference and Supplement*, *Preliminary Report—Aquatic Standards Conference*, *Proceedings—First National Employee Recreation Conference*. Reprints were obtained of the following: *Simplified Stage Lighting*, *Hockey Coaching*, *Here's How To Do It*—Supplement No. 1.

### Production of Audio-Visual Aids

During the year, the filmstrip "*Simplified Stage Lighting*", which was in production at the end of the last fiscal year, was completed and released for distribution.

Production has been started on a co-ordinated package of visual aids on "*Weaving*". It consists of a short introductory film, three filmstrips and a number of loop-films. This combination is, as far as is known, the first of its kind. The various elements are designed to be complementary and to be used together. The resultant package should do a more thorough job than a single longer film and will be considerably less expensive.

The Division obtained special recognition when the filmstrip "*Simplified Staging*" was given one of ten annual awards from the United States publication "*Scholastic Teacher*", one of the largest professional educational journals on this continent. The basis of judging is "all-round excellence, originality, production to a purpose, and stimulation to mental activity". This filmstrip was produced by the National Film Board with the technical direction of the Division.

The films produced by the Division in previous years continue to be in demand and enjoy satisfactory sales. "*Fitness is a Family Affair*", in particular, has been the subject of favourable comment. For example "*The Film Monthly*" states—"This unassuming film, dealing with a major problem of our time, should be seen by as many people as possible. It may really help".

The film "*On Stage*" has also been the subject of much favourable comment. The "*Film User*" for instance says—"An inspiring and practical film for young people; recommended for screening to any small community organization". The *Scholastic Teacher* states—"If you are director for your school's plays, or for an amateur theatrical group, '*On Stage*' is a film for you".

## **Preview Film Library Service**

During the year, 13 blocks of visual aids totalling 48 titles (34 films, 10 filmstrips and 4 loop-films) were circulated within the provinces. On completion of the screening circuit, the visual aids are deposited with the Canadian Film Institute on extended loan for general rental at a minimum charge, part of which goes into a replacement fund.

## **NATIONAL COUNCIL ON PHYSICAL FITNESS**

The Council met in Ottawa, April 10-12, 1951 and in Toronto, September 12-14, 1951. Mr. J. H. Ross, B.Sc., continued to serve as Acting Chairman of the Council.

The following committees have been established by the Council:—Aquatic; Awards; Coaching Schools; Conference on Key Recreation Personnel; Diploma Courses; Financing International Competition; Financial Policies; Folk Festivals; Job Analysis; Legislation; Program for the Advancement of the Fitness of the People of Canada,—Employee Recreation Conference,—Professional School Conference; Publications; R.C.M.P. Fitness Program; Research—History of Physical Education and Recreation in Canada; Sports Governing Bodies; Scholarships; Resolutions.

## **Diploma Course for Public Recreation Personnel**

The Council has continued to concern itself with the establishment of a one year Recreation Diploma Course or Courses in Public Recreation. Invitations to consider establishment of such a course were sent to all Canadian universities. After considering a number of suggestions, preliminary arrangements have been made for the establishment of such a course in the University of British Columbia in the Fall of 1952.

## **Recreation Survey**

Subsequent to the completion of the Recreation Survey which was carried on in co-operation with the Canadian Federation of Mayors and Municipalities and the Parks and Recreation Association of Canada, and which was undertaken on a sampling basis, the Council decided to continue and expand, on a national basis, a similar survey annually to include all municipalities in Canada, of a population of 1,000 or over. Survey forms were distributed to all communities concerned. In the survey based on 1950 data, information was particularly requested on total capital expenditures on facilities up to December 31, 1950, including land, to establish a point of reference for future surveys.

## **First National Conference on Undergraduate Professional Preparation**

At the invitation of the National Council on Physical Fitness, a meeting of representatives of all Professional Schools in Canada granting degrees in Physical Education and/or Recreation was held in Toronto in September 1951. Continuing committees were set up in the following fields: Faculty, Course Content, Students, Facilities and Equipment, Practice Teaching and Field Work. Further reports will be made at later dates.

## **Employee Recreation Conference**

Under the auspices of the National Council on Physical Fitness, a meeting of representatives of national organizations and agencies was held in Ottawa in January 1952 to discuss various problems connected with Employee Recreation.

The Conference established a continuing committee on Employee Recreation and made recommendations to the National Council on Physical Fitness for the establishment of training courses for voluntary leaders in this field.

### **Pan American Institute**

On receipt of an invitation from the Canadian delegate to the Pan American Institute, the National Council on Physical Fitness authorized the Council's participation in the Canadian Committee and appointed the Acting Chairman as their representative.

### **National Amateur Athletic Achievement Award**

The National Council on Physical Fitness approved the presentation of the National Amateur Athletic Achievement Award, as recommended by the Awards Committee, to Dr. Robert M. McFarlane of London, Ontario. The Council further asked the Awards Committee to consider broadening the scope of the Award to include other recreational activities.

### **Scholarships**

Seven Post-Graduate Scholarships were awarded for study in Physical Education and Recreation: Mr. C. M. Bedford (Sask.); Mr. Jean Coutu (Que.); Miss Marion Henderson (B.C.); Mr. W. J. L'Heureux (Ont.); Mr. R. E. Wilkinson (Que.); Miss Joyce McLean (Sask.) and Miss Mona M. Russell (Ont.) advised the Council that they were unable to accept the Scholarship at this time.

Physical Fitness statistics will be found in Tables 38, 39 and 40, pages 157, 158, and 159.

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# CIVIL DEFENCE

## Purpose

The purpose of Civil Defence is to minimize the effects of disaster upon the population of Canada and the property of the Canadian people. To do this, civil defence services are designed to reduce loss of life, to afford medical and other assistance to the civil population, to ensure that essential production will continue, to restore public utilities and services as quickly as possible and to mitigate the property damage that may be caused by enemy attack or disaster. To carry out a program of such magnitude requires the participation and resources of the entire nation. Civil Defence organization and planning, therefore, must be related to and based on the fundamental federal character of this country, which embodies a division of responsibility between federal, provincial and municipal governments.

## Federal Responsibilities

Civil Defence, in its very essence, is the assurance of the maintenance of normal community services and, for this reason, the main operational responsibility, apart from overall plans, training and co-ordination, must fall on those local municipal agencies who carry the day-to-day responsibilities of maintaining the normal amenities of life in Canada's urban communities.

Since Civil Defence must centre on local organization and action, the role of the Federal Government is largely that of a guiding, directing and co-ordinating agency whose job it is to ensure that planning of adequate Civil Defence machinery is carried forward on provincial and local levels; that key personnel and instructors are trained in the various specialized fields; and that sufficient supplies of key materials and equipment required exclusively for Civil Defence purposes are made available on the operational level.

Federal civil defence functions became the responsibility of the Department of National Health and Welfare one month before the commencement of the fiscal year 1951/52. Up to that time, federal action in this field had consisted, mainly, of planning and co-ordination of provincial and municipal effort.

In August, 1950, a conference between the Minister of National Defence and ministerial delegates responsible for Civil Defence in the provinces formed a Federal/Provincial Advisory Committee on Civil Defence, the Chairman being the federal minister responsible for Civil Defence, with membership consisting of those provincial ministers having the same responsibility.

This Advisory Committee met for the second time on February 23, 1951, at the conclusion of which meeting Civil Defence passed over to the Department of National Health and Welfare. At this meeting, the Federal Government assumed the following responsibilities:

(1) The provision of an advance warning system in co-operation with the provincial and local authorities.

(2) The supply of sirens or other warning devices in municipalities that form part of a civil defence target area.

(3) Payment of one-third of the cost of materials for standardizing hose couplings in order to increase interchangeability of fire-fighting equipment within a target area.

(4) Provision of radiological and technical instruments, respirators and special protective clothing for designated civil defence workers in selected areas, in connection with atomic, bacteriological and chemical warfare defence.

(5) The provision of stirrup pumps and auxiliary pumps for training purposes.

(6) Stockpiling at strategic locations across Canada of such medical supplies and equipment as might be considered necessary.

(7) The provision of civil defence staff courses and special courses for leaders and workers, for instructors on ABC defence and other technical matters, as well as the payment of travelling expenses to and from the courses and living expenses while in attendance.

(8) The provision of training aids, manuals and badges for civil defence workers.

(9) Allocation of officers of the armed forces to work closely with provincial authorities in the planning of civil defence programs.

(10) Protection against sabotage of federal works and support for the provinces and municipalities in this respect. This, of course, is arranged through the R.C.M. Police.

(11) Research and development in civil defence matters.

(12) Close co-operation with provincial and local authorities in the working out of all programs for civil defence.

(13) Co-operation with the United States and other countries.

(14) Support by federal agencies and the armed forces in aid of local authorities in the event of an attack.

(15) Civil defence organization within federal departments, the armed forces and other federal agencies.

(16) Public information on general civil defence policy.

## Organization

The general policy is that the civil defence organization should be integrated within the framework of each level of civil government, with each level assuming its own responsibilities and with channels of communication established as follows:

### *(a) On matters of policy*

The Minister of National Health and Welfare will deal with the provincial ministers responsible for civil defence;

### *(b) In the implementation of policy*

The federal Civil Defence Co-ordinator will deal with the provincial Civil Defence Co-ordinator or Director;

### *(c) When policy has been established firmly*

Matters of a technical, specialist or routine nature will be dealt with at the working level, e.g., federal and provincial health authorities will communicate directly with each other, keeping their corresponding civil defence authorities informed.

For civil defence organizational and planning purposes, Canada has been divided into three specific types of area:

**(a) Target Areas**

Those centres liable to attack by reason of population density and industrial potential must be regarded as target areas and should have an organization capable of going into action immediately to minimize the effects of any possible attack.

**(b) Mutual Aid Areas**

The mutual aid area around the target area should be of sufficient size to provide aid to the stricken city and immediate refuge to distressed people.

**(c) Mobile Support and Reception Areas**

In a severe attack it is unlikely that the mutual aid area could provide the necessary accommodation for refugees, except for a few areas, and, in consequence, they must be sent into areas not included in (a) and (b) above. These are known as mobile support and reception areas. They would include most of the smaller cities and rural areas and their role in the event of an attack would be of great importance.

Since the beginning, it has been the federal policy to develop an organization with emphasis placed on training in an effort to achieve quality rather than quantity so that, in the event of an emergency, the organization would be capable of expanding without confusion or disruption. In pursuance of this policy, the federal government outlined a general pattern of organization for each level of government and inaugurated courses of instruction for organizers, to ensure uniformity.

## **Federal Organization**

The organization at the federal level is as follows:

The Minister of National Health and Welfare is responsible for carrying out the approved policy of the Federal Government and for initiating new policy as required. Working through the Deputy Minister of Welfare, a federal Civil Defence Co-ordinator has been appointed to act in an advisory capacity to the Minister and Deputy Minister; to co-ordinate federal planning and action; to maintain liaison with the provinces and corresponding agencies in the United Kingdom, the United States and other countries; and to act as Chairman of the Civil Defence Co-ordinating Committee.

The Civil Defence Co-ordinating Committee has, as permanent members, representatives of the Departments of Agriculture, Finance, Labour, National Health and Welfare, Public Works, Resources and Development, Trade and Commerce, Transport and the R.C.M. Police. In addition, the Committee includes the Secretary of the Chiefs of Staff Committee and the Dominion Fire Commissioner. Representatives of agencies, such as the National Research Council and the Atomic Energy Control Board, are called in when matters affecting them are discussed. The Defence Research Board advises the Minister, the armed services and the Civil Defence Co-ordinator on scientific developments in this and other countries on matters concerning civil defence.

The staff of the federal Civil Defence Co-ordinator has been subdivided as follows:

**(a) Operations and Training**

This group has the responsibility of developing strategical and tactical operational plans, conducting training at federal schools and assisting provincial and local schools as required.

**(b) Administration and Supply**

This sub-division deals with problems of administration, including relationships with other federal departments and with provincial civil defence authorities. It is also responsible for the procurement of training aids and equipment through the Department's Purchasing and Supply Division.

**(c) Other Service Activities**

These include Civil Defence Health Planning; Civil Defence Welfare Planning; Communications and Transport (in conjunction with the Department of Transport); Plant and Animal Diseases (under the Department of Agriculture); Police Matters (under the R.C.M. Police); Civil Defence Research and Development (under the Defence Research Board and the Department of National Defence); Civil Defence Information Services.

**(d) Civil Service Defence**

In August 1951 a section was organized to be responsible for developing a program of Civil Defence preparations for the federal Civil Service. Instructors were trained by the federal government and they, in turn, have since trained 680 team and deputy team leaders. It is expected that approximately 5,000 civil servants will be trained by these leaders. Police and fire training is under the guidance of the R.C.M. Police and the Civil Service Health Division has undertaken the First Aid training. The purpose of this overall plan is to ensure that there is one organization in each building capable of being merged into an organization which the city of Ottawa may form in the event of a civil defence emergency.

Detailed information with respect to training activities, supplies and equipment, health planning, welfare planning, warning and communications, transportation and other service activities is given later in this report.

**Provincial Organization**

In the provincial field, each province has set up a civil defence organization within the frame-work of its own government and in accordance with the general pattern followed by the federal government. Each province has appointed a minister responsible for civil defence and a provincial co-ordinator or director. Provincial committees and advisory bodies parallel, closely, those of the federal organization. British Columbia, Alberta, Saskatchewan and Ontario have established provincial civil defence schools to assist in the training of key municipal personnel. Instructors in these schools have, for the most part, been trained at federal training centres and at federal expense.

**Municipal Organization**

At the municipal level, all target areas and communities of over 50,000 population, with one exception, have set up civil defence organizations in accordance with the general pattern at provincial and federal levels. In a number of centres, such as Halifax, Montreal, Windsor, Winnipeg, Edmonton, Vancouver and Victoria, local training schools have been established to train personnel now in the local organizations.

**Federal Progress During the Fiscal Year 1951/52**

The following is a summary of progress made by the federal government with respect to the responsibilities it has assumed in the field of Civil Defence:

(1) Provision of an advance warning system in co-operation with provincial and local authorities:

A national attack warning network has been established. Key points have been selected in all target areas and installations have been completed in over half of them.

(2) The supply of sirens for municipalities forming part of a target area: Two hundred 5-horsepower, 2-tone sirens, complete with control apparatus, have been specially manufactured for all target areas.

(3) Provision of radiological instruments and other technical equipment for designated civil defence workers in selected areas:

Over 70,000 respirators and substantial quantities of helmets, anti-gas suits and other protective clothing, together with a smaller quantity of radiation detection instruments, have been issued to the provinces for the use of civil defence workers in connection with ABC warfare defence.

(4) Standardizing hose couplings to increase interchangeability of fire-fighting equipment:

Although the federal government agreed to pay one-third of the cost of new hose couplings only, subsequent discussions with the provinces resulted in an extension of this offer to cover one-third of the total cost of standardizing hose couplings. Alberta and Ontario have taken advantage of this offer and commitments have been made in these provinces for federal expenditures of one-third of a million dollars.

(5) The provision of fire-fighting equipment for training purposes:

Over 4,000 stirrup pumps have been distributed for training purposes. A prototype of a self-propelled pumping unit has been ordered from the United Kingdom.

(6) Civil Defence organization within federal government agencies:

The Federal Civil Defence organization now has a strength of about 75, inclusive of the Training School staff. As previously mentioned, planning divisions have been established and specialized technical personnel have been engaged or assigned to deal with such problems as health planning, welfare planning, communications, training, transportation and public information.

(7) Training of key organizers and instructors for provincial and local programs:

During the past fiscal year 1,363 civil defence officials, instructors, nurses, doctors and technicians have attended federally-sponsored civil defence courses.

(8) Provision of training aids, manuals and badges for civil defence workers:

Various items of training equipment, such as stretchers, bandages, thunder flashes and field dressings, have been issued to the provinces. Certain technical equipment has been issued to selected civil defence workers and approximately 45,000 civil defence badges have been provided.

(9) Co-ordination with provincial and local authorities:

The closest co-operation has been maintained between the Federal and provincial governments in all phases of civil defence.

(10) Allocation of officers of the Armed Forces to work with provincial authorities:

An agreement has been reached with Army authorities under which liaison officers will be available to act as advisers in assisting civil authorities in the preparation of their plans for civil defence. A number of Service officers have been given special instruction at federal civil defence schools.

(11) Support by the Armed Forces and other federal agencies in the event of an attack:

A firm policy has been established under which military forces may be made available to Civil Defence authorities in the event of a serious emergency. The primary task of the Armed Forces is, however, a fighting one and their participation in civil defence would be of a temporary nature and their role a supporting one.

(12) Protection against sabotage on Federal works and support for the provinces and municipalities:

The R.C.M. Police have taken this problem in hand.

(13) Research and development in civil defence matters:

The Defence Research Board and certain divisions of the National Research Council are actively engaged in a number of projects related to such matters as the use of blood substitutes, shock therapy, weapons' effects and radiation detection instruments.

(14) Stockpiling of essential medical supplies and equipment:

Arrangements have been worked out for the stockpiling, at strategic locations, of essential medical stores for hospitals and first aid stations for speedy distribution to target or possible disaster areas in the event of attack.

(15) Public information and education:

Over 1,000,000 copies of various manuals, pamphlets and other literature have been distributed and an information program, using such media as the press, radio, billboards, exhibits and films, is in progress.

(16) Co-operation with the United States and other countries:

Close co-operation has been maintained between Canada, the United States, the United Kingdom and other countries. A number of federal and provincial employees have attended special courses in the United Kingdom and the United States and a number of experts from these countries have visited Canada.

In addition to the above, the federal government has authorized special grants to assist the St. John Ambulance Association in carrying out basic and advanced first aid instruction for accredited civil defence workers.

A number of public-spirited citizens and industries have come forward to volunteer their services or financial support. In this connection, inquiry was made of the income tax authorities, who have advised that contributions made by individuals or corporations to provincial or municipal civil defence authorities come within the definition of charitable donations for which allowance is given under the Income Tax Act.

## Training

A variety of civil defence courses are made available to civil defence authorities in the provinces. Provision is also made for certain federal government employees to attend courses. All transportation and living expenses for candidates are provided from federal funds. Each province is allotted a specified number of vacancies and the provincial Civil Defence authorities determine what provincial and local candidates will attend. During the year under review, a total of 1,264 civil defence officials, instructors, nurses, doctors and technicians attended civil defence courses sponsored by the Department. These courses were as follows:

(a) *Civil Defence Staff Forums*—two-week courses for selected civil defence officials, federal and provincial. To date, two staff forums have been conducted in Ottawa by the staff of the Civil Defence Technical Training School, for 69 candidates.

(b) *Civil Defence (Short) Staff Forums*—one-week courses for key civic government officials. A total of four courses have been conducted in Ottawa by the staff of the C.D.T.T.S. for 155 candidates.

(c) *Civil Defence General Instructors Courses*—two-and-one-half-week courses for civil defence general instructors. A total of six courses have been conducted at Connaught Rifle Ranges for 168 general instructors.

(d) *Civil Defence Rescue Instructors Courses*—two-and-one-half-week courses for civil defence rescue instructors. A total of three courses have been conducted at the federal school at Connaught Rifle Ranges for 55 rescue instructors.

(e) *Civil Defence Radiation Monitor Instructors Course*—a two-week course conducted at the Royal Military College, Kingston, by officers and men of No. 1 Radiation Detection Unit, Royal Canadian Engineers (Canadian Army) for Civil Defence. A total of 28 civilian candidates, all with science degrees, have attended this course and qualified as instructors.

(f) *Civil Defence Nursing Instructors Course*—A four-day course conducted by a team of instructors from the Civil Defence Health Planning Group. A total of seven courses have been conducted at seven centres across Canada, as a result of which 611 nursing instructors have been trained.

(g) *United States Civil Defence Staff Course*—a one-week staff course conducted by the Federal Civil Defense Administration at Olney, Maryland. A total of 16 key civil defence officers have attended a number of these courses.

(h) *Atomic, Biological and Chemical Warfare Defence Courses*—three-week courses conducted by the Royal Canadian Army Medical Corps School at Camp Borden, Ontario. A total of 45 civilian candidates have attended these courses.

(j) *Medical Officers ABC Indoctrination Courses*—one-week courses conducted by the R.C.A.M.C. school at Camp Borden. A total of 35 civilian doctors have attended these courses.

(k) *United Kingdom Civil Defence Courses*—A total of four Canadian candidates attended courses in England during the fiscal year 1951-52.

(l) *Industrial Plant Protection Course*—This three-day course was sponsored by the department and was conducted in Montreal. Federal instructors assisted the Director of Civil Defence for Montreal. Approximately 380 key personnel attended this course. (This figure not included in overall total.)

(m) *Civil Service Civil Defence General Instructors*—Two courses of one week's duration were conducted by personnel of the Civil Defence Technical Training School for 78 Civil Service Civil Defence instructors at the Hull Armouries.

The following is a breakdown, by provinces, of the numbers trained under the auspices of the Federal Government: British Columbia, 132; Alberta, 139; Saskatchewan, 55; Manitoba, 134; Ontario, 234; Quebec, 308; New Brunswick, 46; Nova Scotia, 80; Prince Edward Island, 10; Newfoundland, 7. Total—1,145.

The remaining number of personnel trained during the fiscal year included federal officials, military, R.C.M. Police and others, making an overall total of 1,264.

## Supplies and Equipment

The following is the financial breakdown, by provinces, of the training equipment, including training aids, manuals, badges and certain technical equipment for designated civil defence workers in selected areas, which the federal government has supplied, on a free issue basis: British Columbia, \$45,189.64; Alberta, \$12,415.08; Saskatchewan, \$4,419.30; Manitoba, \$21,282.51;

Ontario, \$89,485.57; Quebec, \$58,862.34; New Brunswick, \$7,104.21; Nova Scotia, \$11,133.33; Prince Edward Island, \$28.75; Newfoundland, \$427.15. Total—\$250,347.88.

### Health Planning

The function of the Civil Defence Health Planning Group is to initiate and co-ordinate health services planning at federal level; to act as health advisers to the federal Civil Defence Co-ordinator and to be responsible for developing a general pattern for Civil Defence Health Services for Canada to serve as a guide for health services planning at all levels. The group has formed 12 working parties concerned with first aid arrangements, ambulance services, hospital organization, laboratories, sanitation services, mental health, industrial health, mortuary arrangements, essential medical supplies, special weapons problems, blood derivatives, and so forth.

Lists of supplies and equipment necessary for the training of first aid station personnel were established and procurement action taken for 250 training kits. Substantial headway was made in establishing lists of supplies and equipment to be purchased and stored strategically for the operational use of first aid stations in the event of disaster. Arrangements are approaching completion for the purchase and storage of the equipment in collaboration with the Department of National Defence and similar arrangements are close to completion in respect of the essential medical supplies and equipment which would be required for the operation of hospitals, laboratories and other essential health services.

The following material has been prepared: "Civil Defence Health Services Manual"; "Basic First Aid"; "Civil Defence First Aid Supplement"; Hospital Services and Casualty Medical Records; Hospital Planning Survey Kit.

A definite plan of action has been developed and includes the establishment, at local level, of some 226 large mobile first aid stations and the supply of the necessary training equipment to the units; the completion of health services organization at provincial and local levels and the survey and planning, on a uniform basis across the country, of all hospitals located in areas which might come under attack or in areas which would likely be required to support target areas.

### Welfare Planning

With the transfer of Civil Defence from the Department of National Defence to this department, immediate action was taken to:

(a) establish a Civil Defence Welfare Section and appoint an experienced and qualified Civil Defence Welfare Administrative Officer;

(b) establish a Welfare Advisory Committee composed of officials from the welfare field.

A careful study of Civil Defence Welfare Services in Great Britain and the United States was undertaken and visits were made to the two countries in an effort to obtain as much material as possible. The Welfare Administrative Officer, in consultation with various working parties, composed of specialists in the particular fields under consideration, prepared and distributed three pamphlets entitled "Welfare Services in Canada's Civil Defence Program"; "Emergency Feeding"; and "Organization of Welfare Centres and Emergency Lodging". In addition, the following aspects of the Welfare Services were considered and material prepared in draft form: "Emergency Clothing"; "Evacuation and Reception"; "Registration and Information"; "The Care of the Individual"; "Welfare Services in Mutual Aid Areas".

A limited number of liaison visits were made to the provinces. However, in view of a recently authorized increase in establishment, it will be possible for the Welfare Officer to keep in closer touch with provincial and municipal authorities and, also, to provide a greater amount of assistance in the form of informational material.

### **Warning and Communications**

Negotiations were completed with telephone companies for the provision and installation of private and toll lines and equipment comprising a National Civil Defence Warning System. The system will enable dissemination of warnings from military locations (Air Defence Control Centres) to Civil Defence key points in target areas. Liaison with United States civil defence authorities was undertaken with respect to appropriate co-ordination of warning information. Operating procedures were developed and published.

Technical investigations and tests were also conducted and specifications developed for the manufacture, in Canada, of sirens similar to those used in Great Britain during the last war. The siren specified is a distinctive undulating two-tone type with local and remote control facilities. Sirens and control equipment have been distributed to target areas.

Communications equipment has been obtained in conjunction with plans for the development of suitable procedures that would serve as a guide for the operation of existing services. In this connection, studies are continuing with respect to wire line and radio communication arrangements and systems, including integration of amateur radio services and the broadcasting industry to the best extent possible.

A considerable amount of material for the guidance of civil defence authorities with regard to warning and communications has been developed, published and distributed. Tests were also conducted at several exercises and lectures given at the federal Civil Defence Technical Training School.

The Department of Transport has under consideration matters relating to the control of electro-magnetic radiations, as they concern the broadcast industries and other services. This study is being co-ordinated with the United States authorities so that a uniform plan may be evolved for the North American Continent. The military requirements must be considered in this plan and, in order to prevent any enemy from receiving navigation assistance, present thinking contemplates strict control of radio broadcast stations. The Canadian/United States plan is now under formation and it is expected that it will be integrated by June 1, 1952.

### **Transportation**

The Federal Civil Defence Transportation Committee was formed on April 9, 1951, under the chairmanship of a member of the staff of the Board of Transport Commissioners, and with membership consisting of representatives of the major transportation agencies. Activities of this committee to date have consisted, mainly, of a study of the overall transportation problems which may arise in the event of a disaster, such as the transportation of supplies, material and personnel to back up the resources of the provinces and municipalities concerned.

As recommended by the committee, it is anticipated that a Director of Transport will soon be appointed at federal Civil Defence Headquarters.

In order to encourage enrolment of motor vehicles for civil defence, approximately 45,000 vehicle registration stickers have been issued to the provinces to be placed on privately-owned or commercial vehicles after they have been registered for use in a national emergency.

## Animal Health Emergency Organization

The federal Department of Agriculture has established an Animal Health Emergency Organization, with a committee in each province, which will deal with indications of sabotage or direct biological attack in this field during an emergency and thereby assist in the prevention of large-scale epidemics. Some provincial civil defence authorities have already established Health of Animals Committees and it has been suggested that these committees be merged with the new official body in order that there will not be overlapping in any province.

## Information Services

Every effort was made to ensure that all provinces were advised of new ideas and new developments in the civil defence field, and close liaison was maintained in the distribution of information material. This service is represented on the Joint United States/Canada Civil Defence Committee and much useful information has been exchanged between the two countries.

Federal activities in this field included:

(a) *Manuals and Publications*—Approximately 850,000 copies of the following informational material, prepared by the officials concerned with the various subjects, have been distributed: "The Effects of Atomic Bomb Explosion on Structures and Personnel"; "The Training Plan"; "Personal Protection Under Atomic Attack"; "Basic First Aid"; "Technical Guidance on the Provision of Air Raid Shelter"; "First Aid and Home Nursing Supplement"; "Hospital Services and Casualty Records"; "Industrial Plant Protection"; "Civil Defence Health Services"; "Welfare Services in Canada's Civil Defence Program"; "Emergency Feeding"; "A Glossary of Civil Defence Terms"; "Nursing Aspects of ABC Warfare"; "The Warden Service"; "Operations and Control of the Civil Defence Services"; "Water Supplies for Wartime Fire Fighting".

(b) *Press*—Information on new developments has been issued nationally through the Canadian Press, the British United Press and other press services. Items of more local interest have been summarized for the local press. In addition, a number of press conferences have been arranged.

(c) *Radio*—A Civil Defence presentation entitled "Bombed Out" has been completed and released to 105 private stations across Canada. In addition, a number of short civil defence broadcasts have been prepared and carried over the C.B.C. network and other local stations.

(d) *Films*—The following films and film-strips have been procured and supplied to the provinces on a scale determined by the Training Section of the Civil Defence Division: A new Fire Bomb; An Introduction to Radiation Detection Instruments; Atomic Energy; Bikini the Atom Island; Chemistry of Fire; Disaster Control; Fire Fighting for Householders; Fire's the Enemy; First Aid on the Spot; London Fire Raids; Medical Effects of the Atomic Bomb; The Waking Point; Methods of Rescue; Forms of Collapse; Basic Fire Fighting; The Problem of Civil Defence; Basic Chemical Warfare; Rescue; High Explosives, Bombs, etc.; Fire Fighting; Chemical Warfare; Bomb Damage to Unframed Buildings; Effects of Bomb on Buildings; Voids Created by Blast; Bomb Damage to Framed Buildings; Dangerous Structure; Rescue Training Site; Effects of Allied Bombing Attack; Bomb Damage.

(e) *Billboards*—Space on ninety-six billboards in Montreal was offered, free of charge, by a Montreal advertising firm for civil defence purposes. The message used in this case was "Prepare Now—Just In Case".

(f) *Exhibits*—A full-scale civil defence exhibit, 38' x 10', was designed and constructed for use at exhibitions in various parts of Canada. Space was obtained

in the Canadian National Sportsmen's Show, Toronto, March 14 to 22, and the exhibit was first shown at this point. In addition, smaller panel displays, which can be utilized in areas of different sizes, have been designed.

(g) *Signs*—A set of signs for both indoor and outdoor use has been obtained from the Federal Civil Defense Administration of the U.S.A. so that some uniform policy on signs for Canada may be developed. These signs are being studied, along with alternative designs.

### Co-operation with the United States

Meetings have been held between Governor Millard Caldwell, director of Civil Defense in the United States, and the Minister. A Joint U.S./Canada Civil Defence Committee has been formed and Working Groups set up under the following headings:

- No. 1—Medical, Health, Special Weapons Defence and Emergency Welfare Services.
- No. 2—Training and Exchange of Personnel.
- No. 3—State/Province Agreements.
- No. 4—Immigration Matters.
- No. 5—Customs Matters.
- No. 6—Sampling and General Epidemic Control Matters.  
(Combined with Working Group No. 1.)
- No. 7—Public Affairs.
- No. 8—Attack Warning and Communications.
- No. 9—Standardization and Interchange of Equipment.
- No. 10—Standardization of Organization Forms and Procedures.
- No. 11—Reimbursement for Cost of Civil Defence Aid Rendered.

The second meeting of this Joint Committee, held in Ottawa on August 7, 1951, gave concrete effect to the agreement between the two countries, which was approved by an exchange of notes between the two countries on March 27, 1951, and which provided that:

(a) the federal civil defence authorities of the two countries will keep one another informed on all matters relating to civil defence;

(b) they will co-operate in matters relating to legislation and regulations, material, equipment, supplies and facilities, training schools, pamphlets and methods;

(c) they will exchange personnel at the working level and make available to each other the training facilities of their respective countries;

(d) they will clear away all restrictions which would hinder the free passage of materials and personnel required for civil defence purposes across their international boundary;

(e) they will work out arrangements for the closest possible co-operation between state and provincial civil defence organizations and between local civil defence authorities on opposite sides of the border.

It was further agreed at this meeting that the approved channel of communication between the two countries on matters pertaining to civil defence would be through the Defence Research Liaison Office of the Canadian Joint Staff in Washington, D.C.

As far as possible, civil defence activities in the United States and Canada will be co-ordinated for the protection of persons and property from the result of enemy attack as if there were no border.

### **Co-operation with the United Kingdom**

As with the United States, the very closest relationships have been worked out with the civil defence authorities in the United Kingdom. The federal Co-ordinator and certain senior members of his staff, as well as a number of key provincial officials, have attended special courses in Britain.

Canada has been represented on a number of conferences of international significance, such as the U.K./U.S./Canada Combined Conference on Food Aspects of Civil Defence. The Co-ordinator has visited and inspected civil defence installations in the United Kingdom and certain continental countries and Canada, in turn, has played host to a number of civil defence officials from overseas.

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# **ADMINISTRATION BRANCH**

## **INTRODUCTION**

The Administration Branch of the Department consists of the following Divisions: Departmental Secretary's, Information Services, Legal, Library, Personnel, Purchasing and Supply, and Research.

Because these Divisions serve the entire Department, both in Ottawa and in the field, new and increased activities elsewhere in the Department resulted in a greater volume of work for all Divisions of the Administration Branch.

The expansion of the Old Age Security Program, the transfer to the Department of federal civil defence responsibilities, continuing development of the National Health Grants Program, and a general acceleration of many of the Department's other activities were reflected during the past year in increased work for the Administration Branch.

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## **DEPARTMENTAL SECRETARY'S DIVISION**

The Departmental Secretary's Division comprises the Accounts and Estimates Section, Central Registry Services, Correspondence Section, Duplicating Section, Stenographic and Typing Pool, and Parliamentary Papers Section. The usual responsibilities of the Division in respect of the entire Department continued to be carried out during the year.

In addition, new and expanded activities throughout the Department were reflected in a large increase in all aspects of the work of the Division. The impact of Civil Defence was felt particularly in the Duplicating and Accounts and Estimates Sections, where the volume of work was much greater than in previous years. In the latter Section many changes in the manner of preparing Departmental Estimates created a large increase in that phase of the work.

New sub-registries were established by Central Registry Services in the Civil Defence Division and in the Quarantine, Immigration Medical and Sick Mariners Division. Additional up-to-date mechanical equipment in the Duplicating Section and in the Stenographic and Typing Pool made it possible for these Sections to handle a substantially greater volume of work without the necessity for additional staff.

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## **INFORMATION SERVICES DIVISION**

### **Civil Defence**

Apart from its other continuing responsibilities, the new need for informing the public concerning Civil Defence, and for outlining federal objectives and measures to support provincial and local authorities in this field, made exceptional demands upon the Information Services Division. While continuing its

health and welfare educational and informational program, the Division employed all media to explain the purpose of, and to enlist co-operation with, services required to minimize casualties and damage in disaster and to equip the civil population for its role under possible enemy attack.

Within a few months of transfer of the Civil Defence Division to the Department, several illustrated manuals had been produced for distribution through provincial civil defence channels as well as by national organizations concerned for the country's safety. Widespread publicity was obtained through press and radio, and the Division prepared exhibits, posters, books, leaflets and other material designed to present the problem clearly and emphasize the necessity for organization to deal with disaster in either peace or war.

Care was taken not to create undue public apprehension but rather to correct popular misconceptions concerning the lethal power of new weapons and to make it clear that there were ways of mitigating their effects. Bearing in mind the importance of a continuous program of preparedness under international tension, the Division embarked on a long-term informational program rather than an intensive campaign. Canadians were told what might be required of them, how they could prepare for emergency and what they should do in the event of disaster. Promotional work related to recruiting, training, first aid courses, community organization, etc., was left to municipal authorities, but the Division advised on employment of informational media in all such drives.

Liaison was established with provincial civil defence information officers, where they had been appointed, and with provincial Civil Defence Co-ordinators generally, in the distribution of informational material. The Division provided an information representative for the joint United States-Canada Civil Defence Committee. There was a useful exchange of material between the Division and the public affairs office of the Federal Civil Defense Administration of the United States as well as with individual State officials. Visits were paid to several States to relate civil defence informational activities, as required under the international mutual aid agreement.

### **Co-operation with Press and Radio**

Press co-operation continued to make the work of the department known to the public. Picture stories were published dealing with scientific work in the Laboratory of Hygiene and in the Industrial Health Laboratory, and the press was assisted in reporting inspection and preventive work of the Indian Health Services, the Food and Drug Divisions and the Narcotic Control Division. The National Sickness Survey was widely publicized.

Press conferences were arranged and articles were prepared on request for individual publications, including several house organs and trade papers. Press fillers and a weekly column on various aspects of health and welfare were issued monthly and used extensively by weekly papers, while cartoons and verse were featured in 89 English and 26 French publications. Magazine articles were written for a number of periodicals and informational material was prepared relating to Mental Health Week. Information officers attended meetings of editors of both English and French language weeklies.

News releases and liaison with newswriters resulted in the publication of information concerning: civil defence staff forums, the Technical Training School, construction of air raid shelters, meetings of the joint United States-Canada Civil Defence Committee, civil defence exercises in several Canadian cities, civil defence manuals, courses at Royal Military College and Camp Borden and organization of civil defence in the federal civil service, etc. At

least two large daily newspapers published the full text of the manual "Personal Protection under Atomic Attack", one of them using the original illustrations, by arrangement with the Division.

Radio stations everywhere carried frequent reports on departmental activities. National hook-up coverage was obtained on several occasions, on both English and French networks, dealing with old age security, immigration medical inspection, civil defence and narcotic control. Full-length radio reports were carried on the C.B.C.'s "News-Roundup", "International Service" and "Les Actualités".

Two private stations in Ottawa and one in Hull, Que., did on-the-spot broadcasting of several events, including presentation by the Minister of the first Old Age Security cheques.

For the thirteenth consecutive year, many private stations broadcast daily health notes prepared by the Division, making further free contributions to health education in Canada. The Division's original 10-minute dramatizations entitled "Here's Health" continued to be popular with broadcasters, 104 independent radio stations using them as regular features thus providing, free of charge, an important public service. Development of television in Canada was watched closely and consideration was given to this new medium as a method of directing health and welfare information into the home circle.

## **Publications**

Periodicals issued by the Division included "Canada's Health and Welfare" monthly magazine, which this year contained special two-color supplements on "Old Age Security" and "Civil Defence". Also produced were monthly issues of the "Industrial Health Bulletin" and "Canadian Nutrition Notes" as well as an issue of the "Industrial Health Review". The Division served as editorial consultant in the publication of the "Food and Drug News" and this year initiated and edited monthly issues of a "Civil Defence Bulletin".

The policy of producing and distributing health and welfare publications continued and the volume of such material increased. Not including the department's periodicals, distributed regularly to established request lists, the Division distributed approximately 5,600,000 pieces of printed material during the year, of which 4,500,000 were in English and 1,100,000 in French.

Many existing publications were revised and updated. New printing included: a leaflet on "Allergy", the French edition of "Guide to the Diagnosis of Occupational Diseases", "Table of Food Values", the French edition of "Nutrition Cards for Nurses", "Good Habits for Good Teeth", a child training folder on "Baby Talk", "Hockey Coaching", "Let's Co-operate for the Good of Sport", "Posture's Important for Teen'agers", "Play for Pre-Schoolers", the French edition of "Simplified Staging" and "The Chemical Estimation of the Potency of Antibiotics".

Complete revision was initiated of the standard textbook "The Canadian Mother and Child" and of the three Blindness Control publications to be combined under the title "Eye Care". Bilingual cheque inserts were produced for the Family Allowances Division. Extensive rewriting was done on a number of Physical Fitness publications and production of the kits "Film Discussion Guides" and "Study Groups Made Easy" was followed up by liaison with such organizations as Home and School concerning their use. Text and art were completed for a folder entitled "Preparing Your Child for Hospital" and badges and insignia were designed for the Physical Fitness Division in connection with the Canadian Aquatic Standards.

Numerous manuals were printed for public information concerning civil defence and for the training of volunteers in the national preparedness program.

These books included: "Effects of the Explosion of an Atomic Bomb on Structures and Personnel", "The Training Plan", "Personal Protection under Atomic Attack", "Basic First Aid", "Technical Guidance on the Provision of Air Raid Shelter", and manuals prepared by the civil defence health and welfare planning groups.

In co-operation with an industrial plant protection committee of metropolitan Montreal, production was begun of a colorful book entitled "Attack". The Division prepared a simple leaflet dealing with civil defence, for distribution at displays, and issued an eight-page pictorial supplement to the departmental magazine, "Canada's Health and Welfare" outlining the purpose and scope of civil defence. This supplement, presenting a simple but effective picture, was in great demand in all provinces.

Supplementing provincial channels, the Division took advantage of the interest and co-operation of a number of national organizations in the distribution of its informational material. For instance, through the kindness of the Royal Canadian Institute of Architects and of the Canadian Construction Association, copies of the manual "Technical Guidance on the Provision of Air Raid Shelter" were mailed to all members of those organizations.

Several printing projects were undertaken for the new Civil Defence division, including identification and enrolment cards for civil defence workers and certificates for graduates of the federal Civil Defence Technical Training School.

### **Exhibits and Displays**

Exhibits were widely employed. The Department was awarded a special citation by winning first place with its display, for the second consecutive year, at the annual meeting of the American Public Health Association, held this year at San Francisco, California.

A 24-foot dental health display was exhibited at meetings of the Western Canada Dental Association, Winnipeg, the Maritime Dental Association, Charlottetown, and the Canadian Dental Association, Ottawa. Other exhibits were sent, with information officers, to numerous conferences and exhibitions including: the Central Canada Exhibition, Ottawa; Canadian Welfare Council and Ontario Community Work Council meetings in Toronto; Western Regional Conference on Social Work, Atlantic City, N.J., and L'Association des Édicateurs de Langue Française, at Memramcook, N.B.

An extensive display featuring a domestic air-raid shelter as it could be constructed in any basement was made for use at exhibitions and was erected first at the Canadian National Sportsmen's Show in Toronto, in March. Smaller displays were made for use by the Food and Drug Divisions in publicizing inspection and control activities, and a series of portable panel displays, to explain the importance of civil defence preparations, and for use at conventions and meetings, was designed for the Division by the Canadian Government Exhibition Commission.

### **Posters**

Posters were prepared for display in Post Offices and other public buildings to inform senior Canadians of new Old Age Security regulations. The Division arranged for the production of prototypes of signs to be used in connection with civil preparedness. Advantage was taken of an offer from a national outdoor advertising firm to utilize free billboard space, with a civil defence theme, throughout Metropolitan Montreal. Many of these boards were illuminated for night display.

Work was done on a poster on Vegetables and another on Canada's Food Rules, for the Nutrition Division, and two posters on child health were produced for the Indian Health Services.

### Films and Filmstrips

Screen facilities were used extensively both for informational and training purposes. The Division acted as liaison in the previewing, procurement and distribution of films and filmstrips on health and welfare subjects.

The Department was co-sponsor of the film "Hold Back the Night", produced in the interest of Blindness Control. Two departmental screen productions, "Challenge—Science against Cancer" and "The Terrible Twos and the Trusting Threes", received awards at competitions sponsored by film exhibitors, and National Health and Welfare films and filmstrips were widely used, both in Canada and abroad.

Second portion of the film "The Frustrating Fours and the Fascinating Fives" was completed and discussions were held concerning a proposed film on "Psychological Aspects of Disaster". Research and scripting were done for a film on the mental aspects of care of the aged and a start was made on a film on "Rehabilitation of the Mental Patient". Also initiated was a film for the Nutrition Division on "What Should Tommy Eat?" Work was begun on a film and filmstrip on "Weaving" for the Physical Fitness Division.

Filmstrip production continued, with completion of "The Starlight Story" for Indian Health Services, "Teen-Age Teeth", for the Dental Health Division, "Once in Wally's Lifetime", and "What You Should Know about Cancer". Editorial work was provided for the commentary of "Hallucinations", the French version of the film "Breakdown", on the commentary for the French version of "The Terrible Twos and the Trusting Threes", and on the French edition of the Cancer filmstrip.

An Advisory service was provided for all divisions on the visual presentation of informational and educational materials. Films were previewed and purchased for the four departmental film libraries, as well as for civil defence use.

### Biological Photography

Photo services were again provided to all divisions. The Division's Biological Photographic Laboratory, in addition to its regular work, undertook two major projects in connection with the Industrial Health Division's film radiation monitoring service, (a) completion of the design of processing equipment and establishment of sensitometric standards and (b) design and development of a machine to provide positive identification to films used in film radiation monitoring.

### Bilingual Services

The Division ensured that its informational material in all media was appropriate and significant to both English and French-speaking Canadians in all areas. In addition to translation and adaptation, this called for research and liaison, particularly on the part of the information officer in charge of French information services.

### Miscellaneous Activities

Inserts dealing with school attendance were prepared for distribution with Family Allowance cheques. Information work of the Department was explained to groups of graduate nurses attending special university courses, to field officers of the Indian Health Services, to Family Allowances regional directors and to government administrative officers-in-training.

Quantities of the folder "Health Care in Canada", produced previously, were sent overseas for distribution to immigrants through the Immigration Medical Service. At the annual meeting in Montreal of the Canadian Public Health Association, federal and provincial health educators met to discuss mutual problems and the Division's information officers took advantage of every opportunity to visit individual newspapers, radio stations and provincial offices in order to promote health and welfare information.

Conferences were held with the Queen's Printer's officer in charge of sales and distribution, and plans were made for bringing health, welfare and civil defence material before the public through bookstore sales. The Division arranged printing of the departmental Annual Report.

In addition to the customary health and welfare messages carried on outgoing mail, cancellation stamps with a civil defence slogan were provided for use on departmental correspondence, including the millions of envelopes carrying Family Allowances and Old Age Security cheques. On two occasions during the year, intensive advertising campaigns, using press and radio, were employed to promote the early filing of applications under the new Old Age Security regulations. These efforts, which were supplemented by posters, articles and mail material, proved most effective.

Assistance was given to field staffs of the Department, arrangements being made for informational material to be used even in remote areas where field officers of the Indian Health Services were on duty. The Division was represented at meetings of numerous organizations, including a joint planning committee established to study the utilization of informational material, and it assisted in assembling bibliographies and catalogues of literature relating to its fields.

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## LEGAL DIVISION

The volume of legal and administrative services rendered by the Legal Division was considerably increased during the year due to the expanded Old Age Security Program, involving three new Statutes and Regulations, and because of the transfer to the Department of responsibility for Civil Defence.

In addition, the Legal Division continued to provide legal and administrative services to all Divisions of the Department in matters pertaining to the preparation of contracts and agreements, the giving of opinions, and advising and assisting in prosecutions under the various Acts, such as the Food and Drugs Act, the Family Allowances Act and the Opium and Narcotic Drug Act.

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## DEPARTMENTAL LIBRARY

The Departmental Library is concerned with the selection, acquisition and organization of reference and technical books, serial publications, pamphlets and government documents pertaining to all phases of the Department's work. While the collection is intended primarily for the use of the departmental staff, it is increasingly drawn upon by other libraries.

All orders for publications required for regional establishments as well as for those in Ottawa, are processed and recorded in the Main Library. Thus needless duplication is eliminated and it is possible to arrange for quantity orders.

Work continued during the past year on an author-subject-title card catalogue of all reference publications owned by the Department, regardless of location. Additional sets of cards were supplied for unit catalogues in the three Ottawa branches of the Departmental Library, two special collections and two regional libraries; further sizeable collections in other regional establishments will be worked in gradually.

Records of serial publications were transferred to the Union Catalogue maintained by the Canadian Bibliographic Centre (National Library) as well as the records of all additions to the Main Catalogue during the year.

An annotated bibliography was begun on Social Welfare in Canada, half-yearly cumulations of which will be published in the United Nations Social Welfare Information Series.

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## PERSONNEL DIVISION

The Personnel Division conducts the personnel business of the Department with the Civil Service Commission, the Treasury Board staff, the Comptroller of the Treasury and other government agencies. This Division is responsible for advising on changes of organization within the Department, for representing the Department in negotiations about the appointment of staff, and for doing the work required within the Department in connection with promotions, transfers, pay, superannuation, leave, attendance and personnel records.

On March 31, 1952, there were 3,221 employees in the Department, of whom 981 were permanent and 2,240 temporary, an increase of 93 permanent and 183 temporary civil servants during the year. This increase was mainly due to the introduction of the Old Age Security Program and to the transfer to the Department of responsibility for Civil Defence. There were also small increases in the staff of the Indian Health Service and of the Immigration Medical Service overseas.

The relatively small number of permanent civil servants can be attributed to the newness of the department, to the addition of two new Divisions during the year, to the relatively large number of married women employed and to the number of positions normally filled by Indians, who rarely remain at work long enough to become eligible for permanency. Every effort is being made to increase the number of permanent employees.

The turnover of staff for the year amounted to 896, or approximately 28 per cent. Of this total 509 were in the Indian Health Service, which was 45 per cent of that service, and 387 were elsewhere in the Department, or 19 per cent of the remaining staff. The figure of 19 per cent compares very favourably with the rest of the government service. Much of the turnover in the Indian Health Service is due to the fact that the policy is to employ as many Indians as possible: normally there are about 250 on strength.

Only 812 of the staff of the Department were employed at Ottawa. Of these, 411 were in the Health Branch (other than Indian Health Services),

270 in the Administration Branch and 40 in the Welfare Branch, 73 in the Civil Defence Division and 18 in the Indian Health Service. The remainder of the staff were located in other parts of Canada and overseas, as follows:

	Welfare Branch	Health Branch other than Indian Health Service	Indian Health Service	Total
Northwest Territories .....	—	—	21	21
British Columbia .....	57	62	382	501
Alberta .....	53	5	283	341
Saskatchewan .....	52	2	74	128
Manitoba .....	51	16	74	141
Ontario (excluding Ottawa) .....	215	26	240	481
Quebec .....	217	177	28	422
New Brunswick .....	49	24	5	78
Prince Edward Island .....	9	1	1	11
Nova Scotia .....	49	66	12	127
Newfoundland .....	34	8	—	42
Overseas .....	—	116	—	116

Much effort was spent on the reorganization of two of the larger services—the Indian Health Services and the Food and Drug Divisions. An analysis was made of the present responsibilities of these Directorates and changes were planned that would enable them to meet their responsibilities more efficiently. At the same time economy in the use of staff has been a governing factor in recommending any organizational changes.

While there is still a shortage of some categories of professional or scientific specialists required by the Department, this situation improved during the year. This problem was partially solved by arranging for postgraduate study for certain carefully-selected employees of the Department.

## PURCHASING AND SUPPLY DIVISION

The past year proved to be an exceptionally busy one for the Purchasing and Supply Division. Requisitions received totalled 11,200, as compared to 6,635 in the preceding year. This amounted to a 67 per cent increase in volume of work without any increase in staff. The increase is a reflection of general increase in departmental duties.

Upon the transfer of responsibility for Civil Defence to this Department, large quantities of equipment and supplies immediately required were of a type not normally purchased, such as sirens, steel helmets, stirrup pumps, coveralls, blankets, rubber boots, stretchers, incendiary bombs and first-aid equipment. Most items were used for training at the federal Civil Defence Technical Training School in Ottawa, and distribution in quantity was made for training purposes throughout the Provinces. While unfamiliar with these commodities the Division was successful in securing them promptly and at advantageous prices. The Inspection Board of the Department of National Defence rendered valuable assistance in the way of advice and inspection.

Purchases of some items also required for the Armed Forces were routed through the Department of Defence Production for co-ordination of production and production schedules.

Demands of the Indian Health Services Directorate were also increased and included equipment for the new hospitals at Hobbema, Alberta, and Fort Qu'Appelle, Saskatchewan. Five new nursing stations were fully equipped. In

some cases isolation made the problem of efficient supply at the required time a matter of concern to the Division. For instance, the procurement and supply of coal for Moose Factory Indian Hospital, situated on Moose Island, James Bay, again presented great difficulties.

The annual problem of supply to Indian Health Service stations in the East Arctic again arose. Equipment and stores were purchased for shipment to the Eastern Arctic by the "C. D. Howe", "Rupertsland", "N. B. McLean" and the "Regina Polaris", sailing from the ports of Montreal, Quebec and Churchill. Scheduled dates for tractor-train supply were successfully met in central northern areas. Summer shipments from Waterways to the Northwest Territories, Lower Mackenzie and the Western Arctic were also held to schedule.

During the year members of the Division represented the Department on panels convened by the Canadian Government Specifications Board on the development of standards and specifications. As a result, a new standard was established for clinical thermometers and a new plastic tableware was developed for use in federal government institutions.

The Transport Section of the Division purchased 21 new vehicles, including passenger cars, trucks, tractors, a bulldozer, and a prototype rescue vehicle for Civil Defence. Purchase of tires directly from manufacturers was instituted, with normal delivery anywhere in Canada in approximately 72 hours, thereby ensuring efficient and economical supply. Operators' permits and identification cards were issued to all personnel driving departmental vehicles.

The Laboratories of the Health Branch presented increased demands, due to expansion of activities and staff, for laboratory equipment, glassware, chemical and general supplies. Numerous items of advanced scientific equipment were also procured.

Normal items of supply were made available to establishments of the Division of Quarantine, Immigration Medical and Sick Mariners Services in Continental Europe, Gander, Halifax, Quebec, Dorval, Montreal, Vancouver and William Head. Modern X-ray equipment was also provided for the Immigration Medical Services at London, Liverpool, Glasgow and Paris.

Addition of responsibility for administering Old Age Security payments brought increased demands for printing, office equipment, stationery, etc., from the Family Allowances Division.

Liaison for supply purposes was necessary with numerous other federal departments as well as with the British Ministry of Supply.

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## RESEARCH DIVISION

The Research Division continued to be responsible for the collection and analysis of health and welfare material. Major projects underway during the year included the preparation for a draft of the National Health Survey Report, the conduct of a Survey of Welfare Positions in Canada, studies in medical and hospital care in Canada and abroad, and a number of specific studies at the request of other Divisions and private organizations. The Division provided research assistance to the Defence Medical and Dental Services Advisory Board, the National Advisory Committee on Manpower, the National Advisory Committee on the Rehabilitation of Disabled Persons, and the Interdepartmental Committee on Health Insurance.

Close working relations were continued with provincial health and welfare departments, the schools of public health and social work, the Canadian Welfare Council and the national voluntary agencies in both health and welfare fields. Liaison was maintained and information exchanged with leading agencies engaged in social welfare work. The responsibilities of the Division were continued for the preparation of reports on different aspects of health and welfare services in Canada for the United Nations and its specialized agencies, notably the Economic and Social Council and the World Health and International Labour Organizations. The Director of the Research Division was an advisor on Social Security to the delegation representing the Canadian Government at the 34th Conference of the International Labour Organization in Geneva.

### **Social Work Survey**

Work progressed on the Survey of Welfare Positions which was begun in 1951, at the request of the National Conference on Personnel in Social Work, to determine the demand for social workers in Canada. The planning and organizational phases of the study were carried on in co-operation with an Advisory Committee set up by the Canadian Welfare Council and also with the support of voluntary agencies and federal and provincial Departments. The survey, planned as a guide to social agencies and schools of social work in planning staff requirements and training, covers all full-time paid employees in welfare positions as well as vacancies and new positions to be set up, and indicates preferences for qualified social work staff. It is designed to show size, composition and area of work of existing welfare staffs and the distribution and use of qualified social workers. Background reference papers and questionnaires were distributed on the basis of lists prepared by local Survey Representatives. The analysis of the returns and preparation of the report will be completed during the coming fiscal year.

At the request of the Canadian Nurses Association, a study of Head Nurse Functions and Activities was undertaken. The Register of Physicians was maintained, and its records partly transferred to a punch card system. The Division worked with the Epidemiology Division, the Directorate of Health Insurance Studies, the Dominion Bureau of Statistics and Provincial Health Departments in conducting the Canadian Sickness Survey, and assisted the Dental Health Division with its studies on Dental Fluoridation, and the Civil Defence Health Planning Group with various aspects of defence manpower planning and health statistics. The Division participated with the Epidemiology Division in preliminary planning of the morbidity aspects of the International Joint Commission's air pollution study in the Detroit-Windsor area.

In connection with rehabilitation, the Division has been steadily building up its records of services in Canada and reference material on rehabilitation programs in other countries. Research studies have been carried out in connection with the development of departmental programs and also for the assistance of the National Advisory Committee on the Rehabilitation of Disabled Persons. The Director of the Division was appointed one of the three federal representatives on the Advisory Committee.

### **Health Studies**

A number of provincial health survey reports were received and the Research Division began compiling a national health survey report containing comprehensive data on health personnel, services and facilities. In collaboration with the Mental Health Division, a Survey of Psychiatric Services in General Hospitals was undertaken and tabulation of the returns was begun. Assistance was given to the Directorate of Indian Health Services in establishing a system of reporting health and morbidity data. Morbidity and patient movement data

are now being recorded and tabulated from all departmental and non-departmental hospitals serving the Indian and Eskimo populations as well as other health units, including nursing stations and health centres. A list of clinics in Canada was compiled for the Dominion Bureau of Statistics and a summary review of provincial legislation dealing with food standards was prepared for the Legal Division of the Department.

A number of comprehensive bulletins on health insurance programs in other countries were prepared during the year. Using material collected by the Director of Health Insurance Studies, the Division published "Health Insurance in Sweden", and revised an earlier version of "Health Insurance in Denmark". Draft bulletins on Health Insurance in Norway, the Netherlands and in Great Britain 1911-48, were also prepared. The Division continued to assist the Directorate of Health Insurance Studies in carrying out specific projects such as the development of national and per capita cost estimates for different services, the analysis of programs of government and voluntary health and hospital prepayment plans and the preparation of forecasts of future supply of and demand for health personnel in Canada.

### International Studies

A study was also undertaken of international comparisons of expenditures on health, welfare and social security in countries whose social and economic institutions were similar to those of Canada, expressing these comparisons by per capita amounts and as percentages of national income.

During the year, the Division continued to render service to the United Nations' Department of Social Affairs, particularly in connection with studies on children deprived of normal home life and standards of institutional care for children, the survey of legislative and administrative regulations providing economic advantages in favour of the family, and the periodic report on the suppression of traffic in persons and related problems. Work was begun on the use of community welfare centres and on the biennial report on family, community and child welfare. The Division also furnished the United Nations with semi-annual bibliographies on social welfare legislation, and prepared a report on "Health Protection in Local Areas in Canada", for the World Health Organization.

Additional bulletins were produced, including summaries of some of the provincial Health Survey Reports. A monthly article on different aspects of social welfare outside Canada continued to be supplied to "Canada's Health and Welfare". The Division prepared sections of the Canada Year Book and other publications dealing with health and welfare in Canada.

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TABLE 1  
(Civil Service Health Division)

## HEALTH UNIT STATISTICS

FOR THE 5-YEAR PERIOD ENDING 31 MARCH, 1952.

	1947-48	1948-49	1949-50	1950-51	1951-52
Number of personnel under supervision.....	9,710	13,656	15,223	17,480	20,249
Number of Health Units in operation.....	10	12	14	17	17
Number of visits—					
Total.....	35,669	67,591	105,439	136,941	169,084
First visit.....	25,135	47,723	75,117	94,122	123,024
Repeat visit.....	10,534	19,868	30,322	42,819	46,060
Visits by sex—					
Total.....	35,669	67,591	105,439	136,941	169,084
Males.....	13,251	27,072	45,427	62,157	78,701
Females.....	22,418	40,519	60,012	74,784	90,383
Nature of Visits—					
Total.....	35,669	67,591	105,439	136,941	169,084
Illness.....	15,326	26,710	40,497	56,043	66,300
Accident.....	4,590	8,252	10,675	12,941	16,524
Consultation.....	4,719	8,919	11,946	16,885	21,655
Return to Work Visits.....	11,034	23,710	42,321	51,072	64,605
Classification of first visits—					
Total.....	25,135	47,723	75,117	94,122	123,024
Respiratory.....	6,514	12,844	21,054	29,566	35,008
Digestive.....	3,233	6,140	11,308	13,592	17,583
Skin and cellular.....	1,309	2,794	3,882	5,525	7,432
Menstrual disorders.....	2,347	3,721	5,074	5,405	7,067
Emotional disorders.....	345	902	1,276	1,537	2,179
Contagious diseases.....	40	40	57	63	223
Accidents—					
Non-industrial injuries.....	1,786	3,843	5,143	6,026	6,934
Industrial injuries.....	1,048	1,826	2,487	3,027	4,405
Ill-defined and all others.....	8,513	15,613	24,836	29,381	42,193
Disposal—					
Total.....	35,669	67,591	105,439	136,941	169,084
Sent home.....	749	1,614	2,158	3,735	3,980
Return to work.....	34,920	65,977	103,281	133,206	165,104
Referrals—					
Total.....	2,021	4,320	6,114	7,927	9,606
Referred to Health Centre.....	544	839	1,466	2,373	2,825
Referred to family physician.....	1,477	3,481	4,648	5,554	6,781
Index of participation—					
Average monthly number of employee Health Unit visits per 100 personnel supervised....	33	40	58	65	70

TABLE 2  
(Civil Service Health Division)  
HEALTH UNIT STATISTICS—BY MONTHS  
FISCAL YEAR 1951-1952

	Total	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March
Number of personnel under supervision.....		17,757	17,866	17,843	18,060	18,241	18,467	18,507	18,623	18,202	19,714	21,362	20,249
Number of Health Units in operation.....		17	17	17	17	17	17	17	17	17	17	17	17
Number of visits—													
Total.....	169,084	12,460	13,419	12,602	11,745	12,485	13,437	14,719	16,412	14,234	16,718	14,840	16,013
First visit.....	123,024	8,621	9,438	9,027	8,347	8,934	9,682	10,778	11,969	10,834	12,506	10,989	11,899
Repeat visit.....	46,060	3,839	3,981	3,575	3,398	3,551	3,755	3,941	4,443	3,400	4,212	3,851	4,114
Visits by sex—													
Total.....	169,084	12,460	13,419	12,602	11,745	12,485	13,437	14,719	16,412	14,234	16,718	14,840	16,013
Male.....	78,701	5,726	6,417	5,967	5,592	5,955	6,211	7,152	7,477	6,432	7,556	7,068	7,148
Female.....	90,383	6,734	7,002	6,635	6,153	6,530	7,226	7,567	8,935	7,802	9,162	7,772	8,865
Nature of visits—													
Total.....	169,084	12,460	13,419	12,602	11,745	12,485	13,437	14,719	16,412	14,234	16,718	14,840	16,013
Illness.....	66,300	5,224	5,408	4,937	4,803	5,032	5,261	5,791	6,104	5,328	6,330	5,737	6,345
Accident.....	16,524	1,432	1,641	1,448	1,367	1,270	1,300	1,337	1,555	1,236	1,352	1,291	1,295
Consultation.....	21,655	1,593	1,853	1,573	1,769	1,774	1,784	2,040	2,144	1,814	2,030	1,748	1,833
Return to work visits.....	64,605	4,211	4,517	4,644	3,806	4,409	5,092	5,551	6,609	6,256	7,006	6,004	6,440
Classification of first visits—													
Total.....	123,024	8,621	9,438	9,027	8,347	8,934	9,682	10,778	11,969	10,834	12,506	10,989	11,899
Respiratory.....	35,008	2,159	1,838	1,525	1,245	1,491	2,934	3,257	3,995	4,122	4,593	3,824	4,025
Digestive.....	17,583	1,239	1,239	1,617	1,447	1,832	1,438	1,334	1,430	1,372	1,530	1,423	1,483
Skin and cellular.....	7,432	509	751	679	746	681	527	579	577	558	668	562	595
Menstrual disorders.....	7,067	540	608	645	546	520	574	610	702	542	626	530	624
Emotional disorders.....	2,179	143	155	164	173	199	146	166	246	166	191	220	210
Contagious diseases.....	223	9	8	9	6	6	3	7	11	14	30	55	86
Accidents non-industrial.....	6,934	499	713	591	613	573	482	594	607	503	664	514	581
Accidents industrial.....	4,405	419	366	346	325	308	371	382	414	305	391	388	391
Ill-defined and all others.....	42,193	3,104	3,561	3,451	3,247	3,324	3,207	3,849	3,987	3,252	3,814	3,493	3,904
Disposal—													
Total.....	169,084	12,460	13,419	12,602	11,745	12,485	13,437	14,719	16,412	14,234	16,718	14,840	16,013
Sent home.....	3,980	254	235	251	235	265	335	400	374	355	432	381	463
Returned to work.....	165,104	12,206	13,184	12,351	11,510	12,220	13,102	14,319	16,038	13,879	16,286	14,459	15,550
Referrals—													
Total.....	9,606	727	766	792	743	809	749	880	912	669	912	779	868
Referred to Health Centre.....	2,825	242	250	236	255	258	224	248	247	163	251	235	216
Referred to family physician.....	6,781	485	516	556	488	551	525	632	665	506	661	544	652

TABLE 3  
(Civil Service Health Division)  
HEALTH CENTRE STATISTICS  
FISCAL YEAR 1951-52

## NUMBER OF VISITS

Total.....	6,844
First visit.....	3,041
Repeat visit.....	3,803

## VISITS BY SEX

Total.....	6,844
Male.....	4,455
Female.....	2,389

## PHYSICAL EXAMINATIONS

Total.....	2,737
Pre-employment, permanency, etc.....	1,165
Obligatory examination with immunization.....	253
Voluntary.....	715
Other.....	604

## OTHER SERVICES

Total.....	4,107
Accident industrial.....	57
Accident non-industrial.....	431
Immunization.....	1,070
Consultation, interview, etc.....	2,549

## DISPOSAL

Total.....	6,844
Returned to work.....	6,755
Sent home.....	89

REFERRED TO FAMILY PHYSICIAN.....	114
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TOTAL LABORATORY PROCEDURES.....	4,140
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## X-RAY

Total.....	4,212
Chest.....	1,429
Chest (Photo-roentgen unit).....	2,120
Other.....	663

TABLE 4  
(Civil Service Health Division)

ACTIVITIES OF CONSULTANT PSYCHOLOGIST  
FISCAL YEAR 1951-52

NUMBER OF CONSULTATIONS, INTERVIEWS, ETC.—	
Total.....	559
First Interview.....	313
Repeat Interview.....	246
FIRST INTERVIEWS BY SEX—	
Total.....	313
Male.....	213
Female.....	100
SOURCES OF REFERRAL (First Interviews)	
Total.....	313
Nursing Counsellors.....	227
Health Centre Clinicians.....	14
Psychiatrist.....	30
Individual request, personnel, etc.....	42
CHIEF CAUSES FOR REFERRAL (First Interviews)	
Total.....	313
Vocational Guidance.....	111
Job Dissatisfaction.....	74
Personal Maladjustments.....	56
Examination Failures.....	28
Health Factors and Physical Disabilities affecting Job Efficiency.....	27
Miscellaneous.....	17
STAFF CONSULTATIONS	
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TABLE 5  
(Civil Service Health Division)

RETIREMENTS FROM SERVICE—ACCORDING TO DISABILITY  
FISCAL YEAR 1951-52

Male — 180

Female — 45

Total — 225

CAUSE OF DISABILITY	AGE GROUPS					Total
	Under 40	40-44	45-49	50-54	55-59	
Infective and Parasitic.....	2	0	0	4	10	16
Neoplasms.....	0	0	2	1	16	19
Allergic, endocrine, metabolic, nutritional.....	0	1	1	2	5	9
Blood and Blood Forming.....	0	0	0	0	2	2
Mental psychoneurotic personality....	3	4	2	13	18	40
Nervous systems and sense organs.....	0	0	0	6	11	17
Circulatory.....	2	3	2	16	45	68
Respiratory.....	0	0	1	1	2	4
Digestive.....	1	0	2	2	8	13
Genito-urinary.....	0	0	0	0	1	1
Skin and Cellular.....	0	0	0	1	2	3
Bones and organs of movement.....	2	0	3	6	14	25
Congenital malformation.....	0	0	0	1	0	1
Symptoms and Ill-defined.....	0	0	0	0	3	3
Accidents and results of old injuries....	0	0	0	2	2	4
Total.....	10	8	13	55	139	225

TABLE 6  
(Food and Drug Divisions)

DRUGS EXAMINED

FROM: APRIL 1ST, 1951 TO MARCH 31ST, 1952

Laboratory	Domestic	Imports	Total	Passed by Inspectors at Customs	Grand Total	Adulterated	Misbranded	Other Infructions
Halifax.....	206	1,304	1,510	3,400	4,910	30	947	.....
Montreal.....	1,307	1,141	2,448	12,961	15,409	59	774	.....
Ottawa.....	1,163	22	1,185	196	1,381	290	104	5
Toronto.....	484	1,652	2,136	16,601	18,737	56	1,017	139
Winnipeg.....	326	1,364	1,690	6,302	7,992	81	1,142	.....
Vancouver.....	1,009	989	1,998	3,888	5,886	112	520	326
Totals.....	4,495	6,472	10,967	43,348	54,315	628	4,604	470

TABLE 7  
(Food and Drug Divisions)

EXAMINATION OF DOMESTIC FOODS  
FROM: APRIL 1ST, 1951 TO MARCH 31ST, 1952

	LABORATORIES						Adul- terated	Mis- branded	Other Infrac- tions	Totals
	Hali- fax	Mont- real	Ota- tawa	Toron- to	Winni- peg	Van- couver				
Alimentary Pastes.....	4	1	4	2	20	1	4	18		32
Baking Powder, Leavening Agents or Chemicals.....	17		1	15	7	37	9	14		77
Bakery Products—Cakes, Pastry, etc.....	11		40	38	57	20	10	49		166
Beverage and Beverage Concentrates.....	205	368	17	190	226	76	48	189		1,082
Bread, Flour and Cereals.....	14	5	211	8	35	4	4	25		277
Breakfast Foods.....	16			3	19		7	18		38
Confectionery.....	38	12	12	57	33	31	7	89		183
Dairy Products.....	149	1,104	128	454	151	115	1,270	70		2,101
Dessert Powders and Mixes.....	47		43	9	27		7	44		126
Eggs and Egg Products.....	1		3		3					7
Fish and Fish Products.....	149	8	18	1	29	159	26	36		364
Food Colours and Flavours.....	91	6	13	29	26	7	8	102		172
Foods, Oriental.....						2		2		2
Fruits, Fresh.....			12			16	16	1		28
Fruits, Canned.....	4		8	4	20	3	19	7		39
Fruits, Dried.....	25		37	1	4	9	1	17		76
Fruits, Glazed or Candied.....	3				19		1	10		22
Gelatin.....	4		6				1			10
Honey and Honey Products.....	17	114	1	2	25	35	20	42		194
Jams and Jellies.....	3		6	5	23	2	3	6		39
Juices and Syrups.....	122	159	5	2	291	49	10	76		628
Lard and Shortening.....	1	5	7			4	1	5		17
Liquors, Distilled and Fermented.....	41		60			6		5	6	107
Meat and Meat Products.....	160	930	206	106	337	490	421	76		2,229
Nuts.....	7	2	13	27	32	36	6	26		107
Oils.....		7	1	12	5			1		25
Pickles.....	1				16	7	1	5		24
Preservatives.....	4	1	1	3	1	1		2		11
Salad Dressings, Sandwich Spreads and Other Condiments.....	1	2	43	52	38	25	33	36		161
Soup and Soup Mixes.....	1		17	2	11		2	5		31
Spices.....	3	10	4	39	38	131	49	39		225
Sugar and Substitutes.....	3	2	3	4	5		1	4		17
Sweeteners, Artificial.....					2			2		2
Syrups and Molasses.....	6	1	20	26	12	1	8	12		66
Vegetables, Canned.....	14	575	4	3	24	56	87	272		676
Vegetables, Dried.....	4	1	19	1		1	2	2		26
Vegetables, Fresh.....			16	3	3	1		5		23
Vinegar.....				6	19	17	8	8		42
Water.....	32	3	4		4			2		43
Miscellaneous.....	12		51	20	30		10	25		113
Grand Totals.....	1,210	3,316	1,034	1,124	1,582	1,342	2,100*	1,347*	6*	9,608

\* These totals are not included in the righthand column.

TABLE 8  
(Food and Drug Divisions)

## EXAMINATION OF IMPORTED FOODS

FROM: APRIL 1ST, 1951 TO MARCH 31ST, 1952

	LABORATORIES						Adult- erated	Mis- branded	Other Infrac- tions	Totals
	Hal- ifax	Mont- real	Ot- tawa	Toron- to	Winni- peg	Van- couver				
Alimentary Pastes.....	3		2		1			3		6
Baking Powder, Leavening Agents or Chemicals.....	8	1		1	4	3		10		17
Bakery Products—Cakes, Pastry, etc.....	4	9	2	17	15	26		38		73
Beverage and Beverage Concentrates.....	37	6	1	12	9	33	12	12		98
Bread, Flour and Cereals.....	11	9	4	2	4	7		13		37
Breakfast Foods.....	2	4			1			3		7
Confectionery.....	101	48	1	28	119	295	18	113		592
Dairy Products.....	27	93	1	31	4	79	13	50		235
Dessert Powders and Mixes.....	11			3		1		9		15
Eggs and Egg Products.....						1				1
Fish and Fish Products.....	12	7	1	10	473	237	27	63		740
Food Colours and Flavours.....	25			3	11	32	1	23		71
Foods, Oriental.....	2				54			54		56
Fruits, Fresh.....	1			3			1			4
Fruits, Canned.....	2		6	8		60	2	8		76
Fruits, Dried.....	181	249		74	969	745	21	16		2,213
Fruits, Glazed or Candied.....	22				3	10	1	5		35
Gelatin.....			67				10			67
Honey and Honey Products.....						5		1		5
Jams and Jellies.....	35	1			6	68	17	25		110
Juices and Syrups.....	43	4		2	6	54	18	40		109
Lard and Shortening.....	3							3		3
Liquors, Distilled and Fermented.....	1				1			1		2
Meat and Meat Products.....	122	1	13	27	16	399	90	58		578
Nuts.....	164	533	14	240	1,082	387	166	33		3,020
Oils.....	6	13		3	3	14		8		39
Pickles.....	10					11				21
Preservatives.....					1			1		1
Salad Dressings, Sandwich Spreads and Other Condiments.....	31	4	2	12		17	6	32		66
Soup and Soup Mixes.....			5		1			3		6
Spices.....	29	150	1	24	46	58	14	41		304
Sugar and Substitutes.....										
Sweeteners, Artificial.....					1			1		1
Syrups and Molasses.....	202	649		3	5	5	2	7		864
Vegetables, Canned.....			3	10		23		23		41
Vegetables, Dried.....	3			1	4	5		8		13
Vegetables, Fresh.....	2			11		4	5	6		17
Vinegar.....	5	27				4	1	4	4	36
Water.....										
Miscellaneous.....	20		8	4	42	8	42	41		82
Grand Totals.....	1,125	1,808	131	529	3,481	2,596	496*	819*	4*	9,670

\* These totals are not included in the righthand total column.

TABLE 9  
(Narcotic Control Division)  
CONVICTIONS UNDER THE OPIUM AND NARCOTIC DRUG ACT  
FOR THE JUDICIAL YEAR ENDED SEPTEMBER 30, 1951

PROVINCE	NATURE OF OFFENCE					DRUGS INVOLVED									
	Pos- session of Drugs	Selling, Offering Giving Away and Delivery	Trans- porting	Growing Cann. Sativa	Profes- sional Cases Under Sect 6 of the Act	Totals	Opium	Poppy Heads	Cocaine	Heroin	Marhuana	Demerol	Morphine	Codeine	Totals
Newfoundland.....															
Prince Edward Island.....															
Nova Scotia.....															
New Brunswick.....															
Quebec.....	49	6	3			58			1	45	6	3	2	1	58
Ontario.....	74	5	1			80				68	3		9		80
Manitoba.....	14	1	2			17			1	16					17
Saskatchewan.....	3					3				2				1	3
Alberta.....	10	2		1		13		1	1	10	1				13
British Columbia.....	189	15	1			205	4	1		196		1	1	2	205
Totals.....	339	29	7	1		376	4	2	3	337	10	4	12	4	376

TABLE 10  
(Narcotic Control Division)  
ESTIMATED CONSUMPTION OF THE MAIN NARCOTICS  
FOR THE PERIOD 1942-1951 INCLUSIVE

Unit of Weight—Ounce, Pure Drug

Year	Raw Opium	Medicinal Opium and Prepara- tions	Morphine	Heroin	Cocaine	Ethyl- morphine	Dilaudide	Papaverine	Codaine	Demerol
1942.....	3,562	8,219	3,704	917	1,517	615	14	138	21,983	.....
1943.....	3,704	5,645	4,445	811	1,623	739	12	171	21,630	.....
1944.....	3,810	7,090	3,633	740	1,480	1,458	14	280	22,241	1,042
1945.....	3,175	6,314	3,351	670	1,305	691	12	381	22,809	1,102
1946.....	3,422	4,797	3,492	1,058	1,552	1,110	22	455	36,191	2,045
1947.....	3,932	4,734	3,090	881	1,390	1,107	15	715	36,484	5,894
1948.....	2,090	6,026	3,074	935	1,407	1,032	22	1,416	39,672	5,642
1949.....	2,010	3,606	2,718	898	1,197	949	16	1,359	44,443	6,832
1950.....	2,330	5,375	2,613	1,000	1,408	1,103	16	1,632	45,582	7,270
1951.....	2,020	5,683	2,525	928	1,270	1,561	15	1,362	56,384	8,916

TABLE II  
(Narcotic Control Division)  
IMPORTS OF MAIN NARCOTICS  
For Period 1942-1951 INCLUSIVE

Unit of Weight—Ounce, Pure Drug

Year	Raw Opium	Medicinal Opium and Prepara- tions	Morphine	Heroin	Cocaine	Ethyl- morphine	Dilaudide	Papaverine	Codeine	Demerol	Amidone
1942.....	.....	2,088	2,865	682	1,831	147	14	122	15,291	.....	.....
1943.....	1,344	9,390	4,360	964	2,338	844	14	46	9,777	.....	.....
1944.....	1,056	416	5,229	468	1,233	2,131	10	354	26,149	1,211	.....
1945.....	4,000	3,842	4,791	762	361	1,195	19	571	23,122	2,085	.....
1946.....	4,000	4,614	1,181	1,020	1,797	664	23	805	35,885	5,539	.....
1947.....	3,360	6,458	1,046	906	2,169	745	18	961	36,915	9,018	.....
1948.....	3,200	3,040	3,013	1,019	993	919	26	2,809	34,058	5,175	892
1949.....	1,720	3,202	3,168	906	666	1,433	11	943	37,751	4,106	1,068
1950.....	1,609	4,000	2,337	748	1,344	1,207	21	1,292	93,269	5,480	92
1951.....	1,928	4,423	3,076	1,014	1,053	1,098	17	1,672	37,274	9,189	73

TABLE 12  
(Immigration Medical Service)

## SUMMARY OF ACTIVITIES

FISCAL YEAR 1951-52

## CANADA:

Immigrants medically inspected on arrival at ocean and air ports.....	203,450
Non-immigrants medically inspected on arrival at ocean and air ports.....	20,232
Certified as "prohibited" under Immigration Act, Section 3, (a), (b) and (k).....	49
Certified as physically defective, Section 3 (c).....	235

## OVERSEAS—(United Kingdom, Continent and Orient)

Prospective emigrants medically examined.....	303,467
Certified as "prohibited" under Immigration Act, Section 3, (a), (b), (k) and (l).....	3,884
Certified as physically defective, Sec. 3 (c).....	26,658
Re-examinations.....	26,864

*United Kingdom:*

Prospective emigrants medically examined.....	82,548
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*Continent of Europe:*

Prospective emigrants medically examined.....	217,855
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*Orient:*

Prospective emigrants medically examined.....	3,064
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## DETAILS OF EXAMINATIONS

## EXAMINATIONS OVERSEAS:

	Examinations	Re-examinations
By Canadian Medical Officers in British Isles.....	71,163	8,520
By Roster Doctors in British Isles.....	11,385	654
By Canadian Medical Officers on the Continent.....	189,994	17,231
By Roster Doctors on the Continent.....	27,861	1,427
By Roster Doctors in the Orient.....	3,064	—
Total, 1951-52.....	303,467	27,832
Total, 1950-51.....	136,755	17,560

## EXAMINATIONS OVERSEAS:

By Canadian Medical Officers in London.....	29,889
" " " " in Liverpool.....	18,128
" " " " in Glasgow.....	18,011
" " " " in Belfast.....	5,135
" " " " in Paris.....	23,423
" " " " in Brussels.....	17,407
" " " " in The Hague.....	34,057
" " " " in Copenhagen.....	2,908
" " " " in Stockholm.....	75
" " " " in Bremen.....	6,423
" " " " in Hannover.....	14,506
" " " " in Karlsruhe.....	18,455
" " " " in Linz.....	12,877
" " " " in Rome.....	59,863
By Roster Doctors, in British Isles.....	11,385
" " " " on Continent.....	27,861
" " " " in Pakistan.....	6
" " " " in India.....	54
" " " " in China.....	3,004
Total.....	303,467

(TABLE 12—ctd)

## DETAILS OF EXAMINATIONS

FISCAL YEAR 1951-52

## EXAMINATIONS IN CANADA:

	Immigrants	Non-Immigrants
Gander, Newfoundland.....	7,920	2,725
St. John's, Newfoundland.....	1,000	306
Harmon Field, Newfoundland.....	280	112
Halifax, N.S.....	106,093	1,459
North Sydney, N.S.....	3	179
Sydney, NS.....	163	294
Louisburg, N.S.....	10	14
Saint John, N.B.....	6,924	313
Campbellton, N.B.....	19	3
Chatham, N.B.....	25	10
Moncton, N.B.....	149	148
Quebec, P.Q.....	51,557	6,750
Port Alfred, P.Q.....	72	31
Sorel, P.Q.....	32	2
Three Rivers, P.Q.....	18	1
Dorval, P.Q.....	10,786	4,971
Montreal, P.Q.....	1,241	516
Malton, Ont.....	376	478
Vancouver, B.C.....	1,670	1,395
Victoria, B.C.....	87	100
Ports (not stated).....	160	9
U. S. A. Ports.....	14,820	393
Other Canadian Ports.....	45	22
Totals.....	203,450	20,232

Rejections — 347

TABLE 13  
(Immigration Medical Service)  
CERTIFICATIONS UNDER SECTION 3 OF THE IMMIGRATION ACT  
FISCAL YEAR 1951-52

	CANADA Ocean and Air Ports	BRITISH ISLES		CONTINENT OF EUROPE		TOTAL
		Examined by Can. M.O's	Examined by Roster Drs.	Examined by Can. M.O's	Examined by Roster Drs.	
Certified under:						
SS (a) Mental Diseases and Defects.....	10	101	16	258	26	411
SS (b) Lathsome and Contagious Diseases.....	38	1,077	126	1,774	540	3,555
SS (c) Physical Defects.....	235	6,809	1,118	17,800	2,142	28,104
SS (k) Constitutional Psychopathic Inferiority.....	1	23	2	28	3	57
SS (l) Chronic Alcoholism.....	.....	.....	1	5	1	7
Total.....	284	8,010	1,263	19,865	2,712	32,134

TABLE 14  
(Quarantine Service)

SHIPS BOARDED BY QUARANTINE OFFICERS, 1951-52

The following table indicates the number of ships boarded during the fiscal year 1951-52,  
also total personnel on board, divided into their respective groups

Station	Vessels Inspected	PERSONNEL INSPECTED					
		Passengers				Crews	Cattlemen Slowways, Distressed Seamen, etc.
		First Class	Cabin and Second Class	Tourist Third	Third Class and Steerage		
Halifax, N.S.....	614	10,915	15,714	135,750	14,806	76,893	37
Saint John, N.B.....	342	1,480	372	3,292	3,974	17,258	22
Quebec, P.Q.....	1,325	26,291	1,394	35,633	25,727	80,065	98
William Head, B.C.....	535	988	2,601	.....	496	23,237	18
Totals.....	2,816	39,674	20,081	174,675	45,003	197,453	175
							477,061

TABLE 15  
(Sick Mariners Service)  
TOTAL NUMBER OF VESSELS—DUES COLLECTED AND EXPENDITURES  
CALENDAR YEAR 1951

Vessels	Number Vessels Paying Dues	Total Dues Collected	Total Number of Crew	Total Expenditure	Average Expenditure for each member of Crew
		\$      cts.		\$      cts.	\$      cts.
Foreign.....	2,305	255,215 27	88,917	253,475 50	2 85
Vessels Trading Continually between Canadian Ports.....	4,910	14,897 87	19,974	229,030 79	11 47
Total.....	7,215	270,113 14	108,891	482,506 29	4 43

TABLE 16  
(Quarantine Service)

VESSELS INSPECTED FOR DERATIZATION, 1951-52

Port	Vessels inspected, and fumigated and deratization certificates issued	Vessels inspected and exemption certificates issued	Vessels inspected and remanded or time extended	Vessels inspected and certificates endorsed	Total Vessels Inspected	Rodents Recovered	
						Rats	Mice
Halifax, N.S.	11	43	77	.....	131	7	144
Sydney, N.S.	.....	10	.....	.....	10	.....	.....
Saint John, N.B.	1	16	8	2	27	.....	.....
Quebec, P.Q.	2	14	1	.....	17	267	2
Port Alfred, P.Q.	.....	39	.....	.....	39	.....	.....
Trois-Rivieres, P.Q.	.....	5	.....	.....	5	.....	.....
Sorel, P.Q.	.....	2	.....	.....	2	.....	.....
Montreal, P.Q.	7	107	5	26	145	20	102
Vancouver, B.C.	47	89	31	195	362	100	27
Victoria, B.C.	.....	17	3	62	82	.....	.....
Port Alberni, B.C.	.....	.....	.....	4	4	.....	.....
Totals.....	68	342	125	289	824	394	275

(Family Allowances Division)  
 NUMBER OF EMPLOYEES  
 as at 31st March, 1951

PROVINCE	Authorized Establishment	Permanent	Temporary	Total Filled	Vacancies	Casuals	Remarks
Newfoundland.....	30	12	18	30	.....	6	6 casuals released 31 March, 1951
Prince Edward Island.....	8	6	2	8	.....	.....	.....
Nova Scotia.....	47	23	24	44	.....	.....	.....
New Brunswick.....	43	30	13	40	3	.....	.....
Quebec.....	218	115	103	203	15	.....	.....
Ontario.....	188	106	82	178	10	.....	.....
Manitoba.....	46	25	21	44	2	.....	.....
Saskatchewan.....	48	26	22	43	5	.....	.....
Alberta.....	51	27	24	45	6	.....	.....
British Columbia.....	47	26	21	47	2	.....	.....
Ottawa, Yukon and Northwest Territories.....	14	10	4	14	.....	.....	.....
Total.....	740	406	334	694	46	6	.....

NUMBER OF EMPLOYEES  
 as at 31st March, 1952

PROVINCE	Authorized Establishment	Permanent	Temporary	Total Filled	Vacancies	Casuals	Remarks
Newfoundland.....	30	14	16	29	1	Nil	.....
Prince Edward Island.....	8	6	2	8	.....	.....	.....
Nova Scotia.....	42	28	14	41	1	.....	.....
New Brunswick.....	42	30	12	40	2	.....	.....
Quebec.....	196	110	86	187	9	.....	.....
Ontario.....	186	109	77	178	8	.....	.....
Manitoba.....	41	29	12	41	.....	.....	.....
Saskatchewan.....	44	28	16	39	5	.....	.....
Alberta.....	45	31	14	41	4	.....	.....
British Columbia.....	45	31	14	44	1	.....	.....
Ottawa, Yukon and Northwest Territories.....	15	12	3	15	.....	.....	.....
Total.....	694	428	266	663	31	.....	.....

TABLE 13  
(Family Allowances Division)  
FAMILY ALLOWANCES PAYMENTS  
FISCAL YEAR 1951-52

PROVINCE	April	May	June	July	August	September
Newfoundland.....	\$ 869,718	\$ 874,156	\$ 876,137	\$ 877,692	\$ 878,480	\$ 884,226
Prince Edward Island.....	207,521	207,747	207,790	207,744	207,875	208,261
Nova Scotia.....	1,320,089	1,322,531	1,323,295	1,325,356	1,327,221	1,329,858
New Brunswick.....	1,149,124	1,149,429	1,150,640	1,153,886	1,156,963	1,158,630
Quebec.....	8,445,376	8,445,967	8,509,445	8,516,765	8,551,220	8,593,976
Ontario.....	7,609,209	7,639,480	7,665,319	7,702,765	7,737,701	7,771,068
Manitoba.....	1,374,265	1,377,522	1,380,469	1,388,355	1,394,722	1,395,379
Saskatchewan.....	1,608,675	1,612,449	1,614,103	1,624,984	1,626,910	1,630,195
Alberta.....	1,763,470	1,771,342	1,777,627	1,789,944	1,808,147	1,790,005
British Columbia.....	1,876,514	1,884,609	1,890,752	1,907,729	1,922,358	1,928,980
Yukon and Northwest Territories.....	54,365	54,149	54,386	53,359	57,640	55,694
	26,278,326	26,380,381	26,449,963	26,548,579	26,669,237	26,746,272

PROVINCE	October	November	December	January	February	March	Total
Newfoundland.....	\$ 887,536	\$ 890,594	\$ 891,305	\$ 892,945	\$ 895,821	\$ 899,359	10,617,969
Prince Edward Island.....	208,278	208,066	208,678	207,310	209,241	208,421	2,496,932
Nova Scotia.....	1,329,635	1,332,289	1,336,189	1,334,771	1,339,264	1,342,988	15,963,486
New Brunswick.....	1,159,989	1,159,916	1,163,311	1,165,286	1,168,784	1,169,886	13,905,844
Quebec.....	8,596,895	8,606,703	8,642,476	8,682,735	8,715,623	8,726,127	103,074,308
Ontario.....	7,758,502	7,812,289	7,850,469	7,872,824	7,911,098	7,944,428	93,305,152
Manitoba.....	1,392,228	1,395,176	1,397,408	1,403,211	1,407,069	1,411,512	16,717,316
Saskatchewan.....	1,621,604	1,619,302	1,616,546	1,618,629	1,620,496	1,623,281	19,437,174
Alberta.....	1,814,995	1,807,493	1,815,581	1,818,189	1,817,976	1,825,870	21,600,639
British Columbia.....	1,925,095	1,936,103	1,946,351	1,953,215	1,963,551	1,968,705	23,103,962
Yukon and Northwest Territories.....	55,982	52,773	54,992	55,386	55,265	54,081	658,072
	26,780,739	26,820,704	26,923,306	27,004,501	27,104,188	27,174,658	320,880,854

TABLE 19  
(Family Allowances Division)  
FAMILIES RECEIVING FAMILY ALLOWANCES  
FISCAL YEAR 1951-1952

PROVINCE	April	May	June	July	August	September
Newfoundland.....	51,632	51,774	51,811	51,897	51,855	51,975
Prince Edward Island.....	13,335	13,321	13,335	13,350	13,307	13,307
Nova Scotia.....	92,151	92,172	92,207	92,255	92,266	92,365
New Brunswick.....	72,716	72,699	72,692	72,802	72,750	72,845
Quebec.....	526,231	527,991	529,918	531,120	532,424	534,943
Ontario.....	629,651	631,541	633,333	635,686	637,625	639,142
Manitoba.....	108,500	108,687	108,853	109,134	109,356	109,524
Saskatchewan.....	118,304	118,528	118,775	119,034	119,059	119,185
Alberta.....	136,301	136,813	137,252	137,765	138,217	137,638
British Columbia.....	161,284	161,605	162,010	162,885	163,227	163,785
Yukon and Northwest Territories.....	4,057	4,056	4,075	4,075	4,100	4,083
	1,914,162	1,919,187	1,924,261	1,929,803	1,934,238	1,938,792

PROVINCE	October	November	December	January	February	March
Newfoundland.....	52,107	52,164	52,213	52,262	52,367	52,552
Prince Edward Island.....	13,303	13,297	13,309	13,241	13,260	13,248
Nova Scotia.....	92,309	92,359	92,638	92,626	92,792	93,051
New Brunswick.....	72,799	72,784	72,900	72,981	73,062	73,167
Quebec.....	535,260	536,233	537,443	539,447	541,352	542,651
Ontario.....	638,948	642,561	645,117	647,381	648,618	651,272
Manitoba.....	109,480	109,704	109,941	110,030	110,322	110,466
Saskatchewan.....	119,070	119,007	118,735	118,655	118,714	119,006
Alberta.....	138,713	138,971	139,821	139,827	140,111	140,497
British Columbia.....	163,829	164,431	165,118	165,681	166,281	166,734
Yukon and Northwest Territories.....	4,080	4,045	4,004	4,052	4,079	4,077
	1,939,898	1,945,556	1,951,320	1,956,183	1,960,958	1,966,721

No. of families as at 31st March, 1952.....

1,966,721

1,910,192

Increase.....

56,529

TABLE 20  
(Family Allowances Division)  
CHILDREN RECEIVING FAMILY ALLOWANCES  
FISCAL YEAR 1951-1952

PROVINCE	April	May	June	July	August	September
Newfoundland.....	145,380	146,015	146,323	149,093	147,049	147,714
Prince Edward Island.....	34,358	34,386	34,425	34,423	34,473	34,501
Nova Scotia.....	218,916	219,144	219,402	219,628	219,836	220,137
New Brunswick.....	191,819	191,979	192,106	192,497	192,850	193,181
Quebec.....	1,407,969	1,413,474	1,418,011	1,420,673	1,423,832	1,430,156
Ontario.....	1,270,902	1,276,014	1,280,686	1,286,605	1,291,164	1,295,901
Manitoba.....	228,954	229,519	230,173	231,357	232,232	232,485
Saskatchewan.....	264,999	265,501	265,971	267,675	267,867	268,090
Alberta.....	293,102	294,422	295,697	297,541	299,424	297,357
British Columbia.....	314,596	315,640	316,798	319,228	321,209	322,649
Yukon and Northwest Territories.....	8,886	8,883	8,964	9,001	9,022	9,153
	4,379,881	4,394,977	4,408,556	4,427,721	4,438,958	4,451,324

PROVINCE	October	November	December	January	February	March
Newfoundland.....	148,314	149,081	149,523	149,849	150,368	150,995
Prince Edward Island.....	34,516	34,633	34,723	34,529	34,671	34,698
Nova Scotia.....	220,168	220,559	221,211	221,350	222,008	222,664
New Brunswick.....	193,367	193,502	194,021	194,326	194,955	195,355
Quebec.....	1,430,726	1,434,618	1,439,292	1,444,172	1,449,973	1,454,369
Ontario.....	1,297,873	1,304,206	1,310,400	1,315,097	1,320,736	1,327,304
Manitoba.....	232,914	232,914	233,358	233,920	234,660	235,347
Saskatchewan.....	266,850	266,805	266,486	266,535	266,902	267,625
Alberta.....	299,242	299,752	300,991	301,785	302,427	303,646
British Columbia.....	321,534	323,000	324,623	326,158	327,920	329,130
Yukon and Northwest Territories.....	9,041	8,904	8,980	9,018	9,145	9,053
	4,453,920	4,467,974	4,483,608	4,496,739	4,513,765	4,530,186

No. of children as at 31 March, 1952.....	4,530,186
No. of children as at 31 March, 1951.....	4,367,391
Increase.....	162,795

TABLE 21  
(Family Allowances Division)

CLASSIFICATION OF FAMILIES BY NUMBER OF CHILDREN

Number of Children in family	NUMBER OF FAMILIES AS AT							Comparison of 1952 over 1951
	March 31, 1946	March 31, 1947	March 31, 1948	March 31, 1949	March 31, 1950	March 31, 1951	March 31, 1952	
1 child.....	554,026	645,684	685,251	699,905	730,586	733,100	738,520	+ 5,420
2 children.....	385,464	444,415	472,448	495,176	539,831	567,206	588,238	+ 21,032
3 children.....	207,241	231,494	238,512	254,682	278,161	292,753	309,510	+ 16,757
4 children.....	114,992	120,872	124,277	127,679	140,051	148,109	155,531	+ 7,422
5 children.....	63,676	67,024	67,602	69,298	74,380	77,325	80,339	+ 3,014
6 children.....	37,352	38,012	37,126	38,277	41,353	42,676	43,978	+ 1,302
7 children.....	21,486	21,967	22,088	21,783	23,721	24,073	24,989	+ 916
8 children.....	12,164	12,471	12,365	12,141	13,027	13,428	13,746	+ 318
9 children.....	6,210	6,349	6,132	6,130	6,676	6,823	6,987	+ 164
10 children.....	2,871	2,907	2,766	2,653	2,895	3,065	3,137	+ 72
11 children.....	1,132	1,152	991	1,038	1,149	1,211	1,253	+ 42
12 children.....	320	307	304	301	350	330	384	+ 54
13 children.....	106	78	67	76	74	77	91	+ 14
14 children.....	13	17	14	10	13	11	16	+ 5
15 children.....	1	2	1	1	2	5	1	- 4
16 children.....							1	+ 1



TABLE 23  
(Family Allowances Division)

INCREASE SHOWN IN COMPARING FAMILY ALLOWANCES PAYMENTS  
MARCH 1951 AND MARCH 1952

PROVINCE	Increase in Number of Families Receiving		Increase in Number of Children Receiving		Increase in Amount Paid	
	Number	Percent	Number	Percent	Number	Percent
Newfoundland.....	889	1.72	5,765	3.97	27,911	3.20
Prince Edward Island.....	—69	—0.52*	390	1.14	1,251	0.60
Nova Scotia.....	956	1.04	4,168	1.91	23,925	1.81
New Brunswick.....	475	0.65	3,747	1.96	23,299	2.03
Quebec.....	17,293	3.29	49,208	3.50	289,037	3.42
Ontario.....	23,761	3.79	61,991	4.90	366,813	4.84
Manitoba.....	2,178	2.01	7,102	3.11	40,937	2.99
Saskatchewan.....	730	0.62	3,043	1.15	15,268	0.95
Alberta.....	4,633	3.41	11,542	3.95	71,124	4.05
British Columbia.....	5,646	3.51	15,605	4.98	101,563	5.44
Yukon and Northwest Territories.....	37	0.92	234	2.66	—2,024*	—3.61*
National.....	56,598	2.96	162,795	3.73	959,104	3.66

\* In the case of Prince Edward Island and Yukon and Northwest Territories the figure shown is a decrease.

TABLE 24  
(Family Allowances Division)

AVERAGE ALLOWANCE PER FAMILY AND PER CHILD  
MARCH 1952

PROVINCE	Average per Family	Average per Child
	\$ cts.	\$ cts.
Newfoundland.....	17 11	5 96
Prince Edward Island.....	15 73	6 01
Nova Scotia.....	14 43	6 03
New Brunswick.....	15 99	5 99
Quebec.....	16 08	6 00
Ontario.....	12 20	5 98
Manitoba.....	12 78	6 00
Saskatchewan.....	13 64	6 06
Alberta.....	12 99	6 01
British Columbia.....	11 81	5 98
Yukon and Northwest Territories.....	13 26	5 97
National.....	13 82	6 00

TABLE 25  
(Family Allowances Division)

OVERPAYMENTS OF FAMILY ALLOWANCES REMAINING UNPAID

MARCH, 1952

(The Overpayments may have occurred at any time between July 1, 1945 and March 31, 1952)

PROVINCE	Overpayments Recoverable by Deduction		Overpayments Recoverable by Collection		Overpayments Considered Uncollectible		Total Overpayments Outstanding	
	Number of Accounts	Amount \$ cts.	Number of Accounts	Amount \$ cts.	Number of Accounts	Amount \$ cts.	Number of Accounts	Amount \$ cts.
Newfoundland.....	67	1,746 00	33	709 00	8	150 36	108	2,605 36
Prince Edward Island.....	15	420 00	2	19 00	2	47 00	19	486 00
Nova Scotia.....	89	2,331 00	140	3,494 25	32	1,325 00	261	7,150 25
New Brunswick.....	113	3,507 00	189	5,201 65	119	5,788 50	421	14,497 15
Quebec.....	632	46,052 30	1,808	133,127 75	851	69,061 63	3,291	248,241 68
Ontario.....	206	8,218 49	986	25,239 46	444	19,106 90	1,636	52,564 85
Manitoba.....	69	2,443 00	89	1,804 50	53	2,683 00	211	7,020 50
Saskatchewan.....	53	3,530 97	93	3,523 35	46	2,526 00	192	9,580 32
Alberta.....	98	2,608 00	121	3,291 00	89	4,962 90	308	10,861 90
British Columbia.....	122	5,205 56	165	6,508 40	98	3,941 75	385	15,655 71
Northwest Territories and Yukon.....	22	640 00	30	1,560 80	17	843 52	69	3,044 32
National.....	1,486	76,702 32	3,656	134,569 16	1,759	110,436 56	6,901	371,708 04

TABLE 26

(Family Allowances Division)

## OVERPAYMENTS OF FAMILY ALLOWANCES REMAINING UNPAID

MARCH 31, 1952, COMPARED TO MARCH 31, 1951

(These overpayments may have occurred at any time between July 1, 1945 and March 31, 1952)

PROVINCE	March 1951 Total Overpayments Outstanding		March 1952 Total Overpayments Outstanding		Increase or decrease in total Over- payments since 31st March 1951
	Number of Accounts	Amount \$ cts.	Number of Accounts	Amount \$ cts.	
Newfoundland.....	69	2,081 00	108	2,605 36	+ 524 36
Prince Edward Island.....	29	702 00	19	486 00	- 216 00
Nova Scotia.....	238	8,550 00	261	7,150 25	- 1,399 75
New Brunswick.....	393	13,882 15	421	14,497 15	+ 615 00
Quebec.....	4,079	308,623 95	3,291	248,241 68	- 60,382 27
Ontario.....	1,435	61,530 65	1,636	52,564 85	- 8,965 80
Manitoba.....	185	5,846 50	211	7,020 50	+ 1,174 00
Saskatchewan.....	195	8,809 30	192	9,580 32	+ 771 02
Alberta.....	309	12,278 91	308	10,861 90	- 1,417 01
British Columbia.....	351	13,022 25	385	15,655 71	+ 2,633 46
Yukon and Northwest Territories.....	67	3,074 52	69	3,044 32	- 30 20
	7,350	438,401 23	6,901	371,708 04	- 66,693 19

TABLE 27  
(Family Allowances Division)

BREAKDOWN OF OVERPAYMENTS

DISCOVERED IN FISCAL YEAR ENDED MARCH 31, 1952

PROVINCE	Birth Date Errors		Non-School Attendance		Non-Maintenance		Child Deceased		Non-Residence		Duplicate Accounts	
	Accounts	Amount \$	Accounts	Amount \$	Accounts	Amount \$	Accounts	Amount \$	Accounts	Amount \$	Accounts	Amount \$
Newfoundland.....	9	359	179	1,841	21	551	21	508	5	102	.....	.....
Prince Edward Island.....	2	78	46	433	4	71	2	275	1	42	.....	.....
Nova Scotia.....	2	13	322	4,582	64	2,598	4	21	15	478	2	247
New Brunswick.....	3	145	737	16,906	63	1,457	11	355	17	677	.....	.....
Quebec.....	136	10,869	549	23,438	428	35,003	334	12,858	108	3,588	54	10,367
Ontario.....	5	370	500	12,514	252	6,550	168	7,086	57	1,692	20	1,635
Manitoba.....	9	343	163	2,471	125	2,006	18	1,451	15	408	.....	.....
Saskatchewan.....	20	958	84	1,835	132	5,019	43	1,372	21	540	4	71
Alberta.....	10	1,001	219	4,242	189	3,661	44	2,159	18	812	.....	.....
British Columbia.....	6	247	199	4,964	212	6,114	42	813	46	1,489	4	101
Yukon and Northwest Territories..	7	166	.....	.....	151	3,789	57	3,108	1	5	4	1,477
National.....	209	14,549	2,998	73,226	1,641	66,819	744	30,006	304	9,833	88	13,898

TABLE 27 (Cont'd)

BREAKDOWN OF OVERPAYMENTS

DISCOVERED IN FISCAL YEAR ENDED MARCH 31, 1952 (Cont'd)

PROVINCE	Immigration Requirements		Internal Errors		Working for Wages		Other Causes		Total	
	Accounts	Amount	Accounts	Amount	Accounts	Amount	Accounts	Amount	Accounts	Amount
Newfoundland.....		\$	8	\$ 139	132	\$ 2,632	3	\$ 110	378	\$ 6,242
Prince Edward Island.....					1	2			56	901
Nova Scotia.....			13	327	104	1,436			529	9,734
New Brunswick.....			6	218	82	954	6	32	925	21,006
Quebec.....			140	11,837	1,657	33,349	53	4,976	3,459	146,285
Ontario.....			33	1,055	1,612	29,263	28	1,635	2,675	61,800
Manitoba.....			5	196	227	2,470	7	140	569	9,485
Saskatchewan.....			8	168	127	2,429	7	87	448	12,518
Alberta.....	2	39	19	441	195	3,498	3	30	697	15,844
British Columbia.....			25	1,236	220	2,397	2	18	756	17,379
Yukon and Northwest Territories.....			2	40			9	881	231	9,466
National.....	2	39	259	15,657	4,357	78,430	121	8,203	10,723	310,660

TABLE 28  
(Family Allowances Division)  
BIRTH VERIFICATION

PROVINCE	Balance still to be verified March 31, 1950	Balance still to be verified March 31, 1951	Balance still to be verified March 31, 1952
Newfoundland.....	30,528	9,826	9,393
Prince Edward Island.....	230	597	980
Nova Scotia.....	1,432	5,039	10,102
New Brunswick.....	4,479	3,850	6,390
Quebec.....	88,905	51,621	49,469
Ontario.....	17,883	28,659	23,648
Manitoba.....	2,642	4,089	8,001
Saskatchewan.....	2,491	2,941	6,624
Alberta.....	3,276	4,790	9,060
British Columbia.....	4,642	4,890	13,681
Yukon and Northwest Territories.....	313	267	601
National.....	156,821	116,569	137,949



TABLE 30  
(Family Allowances Division)  
TRANSFER OF FAMILY ALLOWANCES ACCOUNTS BETWEEN PROVINCES  
FISCAL YEAR 1951-52

	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon and Northwest Territories	Total
<b>TRANSFERS IN:</b>												
April.....	23	30	92	80	329	734	208	215	244	340	25	2,320
May.....	47	44	152	128	301	795	289	327	411	425	25	2,944
June.....	48	54	176	148	458	1,052	289	358	371	477	25	3,467
July.....	37	40	159	140	403	899	252	241	365	508	25	3,069
August.....	29	42	171	134	278	1,052	276	224	430	532	24	3,192
September.....	43	34	220	127	354	1,139	368	290	455	635	27	3,692
October.....	70	46	244	194	503	1,395	297	254	465	630	40	4,138
November.....	42	45	218	166	455	1,198	374	254	560	560	28	3,901
December.....	32	38	238	132	488	1,115	266	218	540	900	36	3,703
January.....	31	28	162	142	375	884	224	240	386	528	16	3,016
February.....	35	36	186	129	407	643	237	193	307	455	42	2,670
March.....	30	25	202	107	324	707	214	193	295	306	16	2,419
<b>Total.....</b>	<b>467</b>	<b>462</b>	<b>2,220</b>	<b>1,627</b>	<b>4,076</b>	<b>11,613</b>	<b>3,294</b>	<b>3,007</b>	<b>4,829</b>	<b>5,996</b>	<b>340</b>	<b>38,591*</b>
<b>TRANSFERS OUT:</b>												
April.....	47	37	193	150	262	490	259	227	311	380	24	2,380
May.....	42	55	233	237	427	564	313	337	329	403	32	2,972
June.....	64	55	257	234	414	806	386	382	384	434	27	3,443
July.....	65	48	271	186	418	652	363	384	435	523	24	3,169
August.....	78	62	242	264	441	696	330	346	363	449	41	3,312
September.....	84	65	319	254	370	834	491	408	602	520	41	3,988
October.....	86	51	330	308	517	814	450	583	469	458	46	4,194
November.....	74	60	335	273	500	993	393	515	558	361	39	4,204
December.....	37	35	185	195	498	636	290	620	220	288	16	3,020
January.....	58	68	216	148	390	593	311	502	539	235	54	3,104
February.....	25	44	200	159	310	610	212	324	337	267	20	2,508
March.....	40	39	140	110	284	587	240	246	327	259	25	2,297
<b>Total.....</b>	<b>700</b>	<b>631</b>	<b>2,981</b>	<b>2,518</b>	<b>4,831</b>	<b>8,378</b>	<b>4,038</b>	<b>4,874</b>	<b>4,874</b>	<b>4,377</b>	<b>389</b>	<b>38,591*</b>

\* Difference of 60 accounts in transit between provinces

TABLE 31  
(Old Age Security Division)

## STATISTICS ON OLD AGE SECURITY

PROVINCE	A	B	C	D	E	F	G
	No. of pensioners in pay March 31, 1952 as result of direct application	No. of pensioners in pay March 31, 1952 transferred from Old Age Pensions	Total Number of pensioners in pay March 31, 1952 (A plus B)	Net Payment for March, 1952 only	Total Net payment for months of January, February, March, 1952	No. of deaths reported in March, 1952	Deferred applications for January and February as of March 31, 1952 (Note 1)
Newfoundland.....	2,449	11,728	14,177	\$ 589,160	\$ 1,697,080	64	43
Prince Edward Island.....	3,193	3,145	6,338	255,440	754,720	58	66
Nova Scotia.....	13,901	20,931	34,832	1,420,240	4,124,080	262	131
New Brunswick.....	7,754	16,786	24,540	988,840	2,935,240	236	38
Quebec.....	64,317	75,637	139,954	5,638,000	16,579,994	874	746
Ontario.....	147,878	91,047	238,925	9,700,680	28,154,920	1,930	481
Manitoba.....	20,013	17,813	37,826	1,595,840	4,457,480	208	172
Saskatchewan.....	19,697	17,456	37,153	1,510,400	4,399,120	178	230
Alberta.....	18,391	18,246	36,637	1,485,080	4,333,120	225	186
British Columbia.....	39,066	33,159	72,225	2,922,360	8,543,040	285	286
Yukon and Northwest Territories.....	290	116	406	16,760	48,040	5	10
Total.....	336,949	306,064	643,013	26,032,800	76,066,834	4,325	2,389

Note 1—Column G refers to the number of applications submitted for January and February payment which were not approved by the end of March, 1952.

TABLE 32  
(Old Age Pensions Division)

FEDERAL PAYMENTS OF OLD AGE PENSIONS UNDER THE OLD AGE PENSIONS ACT, BY PROVINCES

FISCAL YEAR 1951-52

PROVINCE	Federal Payments for fiscal year 1951-52	Federal Payments since inception of Act
	\$ cts.	\$ cts.
Alberta.....	4,590,331 49	49,503,609 17
British Columbia.....	8,080,866 54	75,602,422 28
Manitoba.....	4,595,957 43	57,451,226 76
New Brunswick.....	4,153,006 72	41,420,620 65
Newfoundland.....	3,094,762 74	9,143,283 27
Nova Scotia.....	5,030,880 59	53,632,471 32
Ontario.....	23,286,334 41	276,581,983 49
Prince Edward Island.....	745,143 45	6,545,666 90
Quebec.....	19,078,137 52	185,223,043 25
Saskatchewan.....	4,515,748 41	55,942,192 59
Northwest Territories.....	8,955 77	79,158 15
Yukon.....	24,147 37	85,655 58
Total.....	77,204,272 44	811,211,333 41

TABLE 33  
(Old Age Pensions Division)

FEDERAL PAYMENTS IN RESPECT OF BLINDNESS UNDER THE OLD AGE PENSIONS ACT, BY PROVINCES

FISCAL YEAR 1951-52

PROVINCE	Federal Payments for fiscal year 1951-52	Federal Payments since amendment to O.A.P. Act
	\$ cts.	\$ cts.
Alberta.....	129,609 10	1,013,741 42
British Columbia.....	176,923 77	1,407,645 53
Manitoba.....	157,412 27	1,355,850 91
New Brunswick.....	285,471 66	2,711,019 67
Newfoundland.....	100,664 50	239,063 51
Nova Scotia.....	267,014 49	2,371,242 06
Ontario.....	651,182 78	5,848,836 75
Prince Edward Island.....	31,893 76	332,532 89
Quebec.....	1,066,635 18	9,402,551 72
Saskatchewan.....	133,945 15	1,241,101 61
Northwest Territories.....	460 00	2,640 00
Yukon.....	540 00	1,500 00
Total.....	3,001,752 66	25,927,726 07

TABLE 34  
(Old Age Pensions Division)

NUMBER OF OLD AGE PENSIONERS, AVERAGE MONTHLY PENSION, AND PERCENTAGE OF PENSIONERS TO POPULATION OVER 70 YEARS OF AGE, BY PROVINCES, AS AT DECEMBER 31, 1951

PROVINCE	Number of Pensioners	Average Monthly Pension	*Percentage of pensioners to population over 70 years of age
		\$ cts.	
Alberta.....	18,408	37 53	48.57
British Columbia.....	33,060	36 75	46.17
Manitoba.....	17,906	38 16	45.91
New Brunswick.....	16,825	36 58	72.21
Newfoundland.....	11,925	38 02	86.41
Nova Scotia.....	20,808	35 64	59.28
Ontario.....	93,175	37 73	37.26
Prince Edward Island.....	3,226	34 92	52.03
Quebec.....	75,541	37 68	54.58
Saskatchewan.....	17,844	37 48	45.17
Northwest Territories.....	22	38 69	12.02
Yukon.....	85	38 75	25.91
Canada.....	308,825		

\* Percentages based on the estimated population at June 1, 1950 (Dominion Bureau of Statistics) except Yukon Territory and Northwest Territories which are based on 1941 Census.

TABLE 35  
(Old Age Pensions Division)

NUMBER OF BLIND PENSIONERS AND AVERAGE MONTHLY PENSION, BY PROVINCES, AS AT DECEMBER 31, 1951

PROVINCE	Number of Pensioners	Average Monthly Pension
Alberta.....	507	38.50
British Columbia.....	684	38.07
Manitoba.....	584	39.14
New Brunswick.....	1,082	39.03
Newfoundland.....	385	39.33
Nova Scotia.....	1,028	38.39
Ontario.....	2,491	38.71
Prince Edward Island.....	125	38.15
Quebec.....	3,948	39.06
Saskatchewan.....	498	38.88
Northwest Territories.....	1	40.00
Yukon.....	2	40.00
Total.....	11,335	

TABLE 36  
(Old Age Pensions Division)

NUMBER OF RECIPIENTS, AVERAGE MONTHLY ASSISTANCE AND TOTAL  
FEDERAL PAYMENTS, UNDER THE OLD AGE ASSISTANCE ACT, BY PROVINCES  
AS AT MARCH 31, 1952

PROVINCE	Number of Recipients	Average Monthly Assistance	Federal Payments to March 31, 1952
		\$ cts.	\$ cts.
Alberta.....	2,954	37 36	144,051 36
British Columbia.....	4,134	38 28	262,668 27
Manitoba.....	1,239	38 45	106,689 51
New Brunswick.....	3,237	36 91	165,637 56
Newfoundland.....			
Nova Scotia.....	2,271	34 09	95,673 45
Ontario.....	12,697	37 28	672,512 10
Prince Edward Island.....	305	21 72	6,532 45
Quebec.....	12,267	38 61	690,081 24
Saskatchewan.....	2,497	36 93	133,392 55
Total.....	41,601		2,277,238 49

TABLE 37  
(Old Age Pensions Division)

NUMBER OF RECIPIENTS, AVERAGE MONTHLY ALLOWANCE, AND TOTAL  
FEDERAL PAYMENT UNDER THE BLIND PERSONS ACT, BY PROVINCES  
AS AT MARCH 31, 1952

PROVINCE	Number of Recipients	Average Monthly Allowance	Federal Payments to March 31, 1952
		\$ cts.	\$ cts.
Alberta.....	376	38 89	33,766 59
British Columbia.....	426	39 25	37,827 17
Manitoba.....	401	39 37	35,948 87
New Brunswick.....	783	39 25	69,185 98
Newfoundland.....	321	39 26	28,237 49
Nova Scotia.....	734	38 69	64,199 33
Ontario.....	1,604	39 20	142,984 41
Prince Edward Island.....	75	38 10	6,460 17
Quebec.....	3,013	39 48	271,902 08
Saskatchewan.....	343	39 25	30,667 15
Northwest Territories.....	1	40 00	90 00
Yukon Territory.....	2	40 00	180 00
Total.....	8,079		721,449 24

TABLE 38  
(Physical Fitness Division)

SUMMARY OF AMOUNTS AVAILABLE FOR AND PAID TO PROVINCES UNDER THE  
NATIONAL PHYSICAL FITNESS ACT

	Amount of Matching Grant Available Annually (b)	Amount Paid in Fiscal Year (a)										Total Payments 1944-52				
		1944-45	1945-46	1946-47	1947-48	1948-49	1949-50	1950-51	1951-52							
		\$	cts.	\$	cts.	\$	cts.	\$	cts.	\$	cts.					
Prince Edward Island.....	1,858	50										1,858	50	12,395	74	
Nova Scotia.....	11,301	75												80,442	76	
New Brunswick.....	8,943	75												32,595	42	
Quebec (d).....	65,151	00														
Ontario.....	74,063	25														
Manitoba.....	14,269	50														
Saskatchewan.....	17,520	75														
Alberta.....	15,567	75														
British Columbia.....	15,993	00														
Northwest Territories.....	234	00														
Yukon (d).....	96	75														
Newfoundland.....	7,000	00														
Totals.....	(c) 232,000	00	23,434	18	87,699	75	89,635	29	78,884	76	79,678	56	150,675	42	711,812	79

- (a) The amount paid to the province in any one fiscal year does not necessarily coincide with the amount available to it in that year, as payments in respect of previous years may be included.
- (b) Amounts were originally calculated on a per capita basis of distribution to nine provinces. In 1947 they were recalculated to include the Northwest Territories and Yukon. The figures given are the recalculated amounts.
- (c) On entry of Newfoundland into Confederation in 1949, the annual federal grant was increased in order to make provision for the new province.
- (d) These provinces do not participate at the present time.
- (1) Payment for 1950-51 claim.
- (2) Claim for 1951-52 not yet received.

TABLE 39  
(Physical Fitness Division)

SUMMARY OF ALLOTMENTS AND EXPENDITURES  
PHYSICAL FITNESS DIVISION  
FOR THE FISCAL YEAR 1951-52

ADMINISTRATION	\$	cts.
Balance from fiscal year 1950-51.....	42,148	15
Parliamentary Appropriations 1951-52.....	68,240	00
	110,388	15

EXPENDITURES—	\$	cts.
Total Salaries.....	24,126	76
Professional and Special Services.....	3,135	00
Travelling Expenses—Staff.....	3,667	84
Freight, Express and Cartage.....	634	42
Postage.....	95	34
Telephones and Telegrams.....	1,130	59
Printing of Educational, Informational and Other Publications.....	29,741	82
Educational and Informational Material Other than Publications.....	4,412	83
Office Stationery, Supplies and Equipment.....	2,817	19
Travelling Expenses—Council Members and Others.....	5,918	83
Sundries.....	1,042	77
	76,723	39
Balance at end of fiscal year 1951-52.....	33,664	76

ASSISTANCE TO PROVINCES

Balance from fiscal year 1950-51.....	175,201	10
Parliamentary Appropriations 1951-52.....	82,214	00
	257,415	10

EXPENDITURES—	\$	cts.
Prince Edward Island.....	1,858	50
Nova Scotia.....	9,260	69
New Brunswick.....	8,412	32
Ontario.....	74,063	25*†
Manitoba.....	9,573	45*†
Saskatchewan.....	17,520	75
Alberta.....	15,567	75
British Columbia.....	15,993	00
Northwest Territories.....	—	†
	152,249	71
Balance at end of fiscal year 1951-52.....	105,165	39

\* This constitutes a late payment for the year 1950-51.

† The claim for the fiscal year 1951-52 has not yet been received from this province.

*Special Note:* These figures are not final.

TABLE 40  
(Physical Fitness Division)

ASSISTANCE TO PROVINCES AND PROVINCIAL EXPENDITURES  
UNDER NATIONAL PHYSICAL FITNESS ACT, 1951-52

PROVINCE	Provincial Department Responsible for Administration	Date of Expiration of Current Agreement	TOTAL EXPENDITURE				PER CAPITA <sup>(2)</sup>	
			Provincial	Federal	Total		Province	Total
			\$	\$	\$	cts.		
Prince Edward Island.....	Dept. of Education, Charlottetown	31 March, 1952 <sup>(1)</sup>	14,673 40	1,858 50	16,531 90		-1544	-1739
Nova Scotia.....	Dept. of Public Health, Halifax <sup>(2)</sup>	31 March, 1953	9,047 15	9,043 74 <sup>(3)</sup>	18,090 89		-0157	-0313
New Brunswick.....	Dept. of Education, Fredericton	31 March, 1953	22,149 22 <sup>(4)</sup>	8,412 32	30,561 54		-0484	-0668
Ontario.....	Dept. of Education, Toronto	31 March, 1952 <sup>(1)</sup>	390,537 22 <sup>(4)</sup>	74,063 25 <sup>(5)</sup>	464,650 47		-1031	-1227
Manitoba.....	Dept. of Health and Public Welfare, Winnipeg	31 March, 1952 <sup>(1)</sup>	13,639 46 <sup>(4)</sup>	13,125 96 <sup>(7)</sup>	26,765 42		-0187	-0367
Saskatchewan.....	Dept. of Education, Regina	31 Dec., 1953	38,307 75	17,520 75	55,828 50		-0428	-0623
Alberta.....	Dept. of Education, Calgary	31 March, 1952 <sup>(1)</sup>	42,531 67	15,567 75	58,099 42		-0534	-0730
British Columbia.....	Dept. of Education, Vancouver	31 March, 1952 <sup>(1)</sup>	115,478 41	15,993 00	131,471 41		-1412	-1608
Northwest Territories.....	Dept. of Resources and Development, Ottawa	31 March, 1953	23,003 67	234 00 <sup>(7)</sup>	23,237 67		1-9125	1-9320

## NOTES:

- (1) Renewal of provincial agreements for the period 1 April, 1952 to 31 March, 1953 in process.  
 (2) As from the commencement of the term of the current agreement, the provincial Department responsible for administration in the province of Nova Scotia will be the Department of Education.  
 (3) Based on 1941 census figures on which payments for 1951-52 were based.  
 (4) Includes provincial expenditures not shareable under the terms of the National Physical Fitness Act.  
 (5) Estimated payments in respect of Nova Scotia for current financial year. A total of \$9,260.69 was actually paid, including claims in respect of the previous financial year.  
 (6) Late payment for 1950-51—payment for 1951-52 not included.  
 (7) Estimated claim for 1951-52. Actual claim not yet received.

TABLE 41  
(Expenditures 1951-52)

DEPARTMENT OF NATIONAL HEALTH AND WELFARE  
(Including Administration, Construction or Acquisition of Buildings or Equipment, Grants, etc.)

HEALTH BRANCH:	\$	cts.	\$	cts.	\$	cts.
General Administration.....			104,200	42		
<i>General Health Services</i>						
Administration of the Food and Drugs Act..	802,041	44				
Administration of the Proprietary or Patent Medicines Act.....	23,595	17				
Administration of the Opium and Narcotic Drugs Act.....	150,133	61				
Administration of the Quarantine and Leprosy Acts.....	293,617	01				
Laboratory of Hygiene.....	406,613	38				
Immigration Medical Services.....	1,275,376	02				
Child and Maternal Health.....	76,973	34				
Public Health Engineering.....	140,011	75				
Sick Mariners Medical Services.....	564,009	02				
Industrial Health.....	180,176	75				
Civil Service Health.....	240,223	23				
Nutrition.....	116,036	04				
Venereal Disease Control.....	26,688	25				
Health Insurance Studies and Administration of General Health Grants.....	64,801	91				
Dental Health.....	38,798	04				
Hospital Design and Consulting Service....	19,575	75				
Mental Health.....	53,464	74				
Blindness Control.....	31,435	72				
Epidemiology.....	37,337	64				
Civil Aviation Medicine.....	20,520	07				
Indian and Eskimo Health Services.....	11,816,490	73				
Total.....			16,377,919	61		

TABLE 41 (ctd)

	\$	cts.	\$	cts.	\$	cts.
Carried Forward.....			16,482,120	03		
GRANTS TO PROVINCES						
Health Survey Grant.....	73,913	81				
Hospital Construction Grant.....	9,166,471	05				
General Public Health Grant.....	3,604,653	00				
Tuberculosis Control Grant.....	4,045,533	36				
Mental Health Grant.....	3,724,403	02				
Venereal Disease Control Grant.....	480,189	75				
Crippled Children Grant.....	350,319	27				
Professional Training Grant.....	521,375	66				
Public Health Research Grant.....	313,546	57				
Cancer Control Grant.....	2,042,091	68				
Total.....			24,322,497	17		
GRANTS TO NON-GOVERNMENTAL AGENCIES						
Grant to Institutions Assisting Sailors.....	2,600	00				
Canadian Mental Health Association.....	10,000	00				
Health League of Canada.....	10,000	00				
Canadian Public Health Association.....	5,000	00				
Canadian National Institute for the Blind...	45,000	00				
L'Association Canadienne Francaise des Aveugles.....	6,000	00				
L'Institut Nazareth de Montreal.....	4,050	00				
Montreal Association for the Blind.....	4,050	00				
Canadian Tuberculosis Association.....	20,250	00				
Victorian Order of Nurses.....	13,100	00				
St. John Ambulance Association.....	10,000	00				
Canadian Red Cross.....	10,000	00				
Canadian Paraplegic Association.....	15,000	00				
Total.....			155,050	00		
Total HEALTH BRANCH.....			40,959,667	20		

\$	cts.	\$	cts.	\$	cts.
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30	00	30	00	30	00
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670	00	670	00	670	00
680	00	680	00	680	00
690	00	690	00	690	00
700	00	700	00	700	00

(c) Includes gratuities to families of deceased employees.

(c) Includes gratuities to families of deceased employees.

# DEPARTMENT OF NATIONAL HEALTH AND WELFARE

## MINISTER

HONOURABLE PAUL MARTIN, Q.C., M.P., LL.M., LL.D.

DEPUTY MINISTER OF NATIONAL HEALTH AND WELFARE (HEALTH)  
G. D. W. CAMERON, M.D., C.M., D.P.H., LL.D.

DEPUTY MINISTER OF NATIONAL HEALTH AND WELFARE (WELFARE)  
G. F. DAVIDSON, B.A., M.A., Ph.D.

## HEALTH BRANCH

FOOD AND DRUG DIVISIONS—*Director*, C. A. Morrell, M.A., Ph.D., F.R.S.C.  
*Laboratory Services, Chief*, L. I. Pugsley, B.A., M.Sc., Ph.D.  
*Inspection Services, Chief*, W. A. Crandall, B.A., M.Sc.  
*Proprietary or Patent Medicines, Chief*, Paul Soucy, Phm.B.

HEALTH INSURANCE STUDIES DIRECTORATE—*Director*, F. W. Jackson, M.D., D.P.H.  
*Assistant Directors*, G. E. Wride, M.D., D.P.H.: Emile Martel, M.D., D.P.H.

HEALTH SERVICES DIRECTORATE—*Director*, H. A. Ansley, M.D., D.P.H.  
*Assistant*, B. D. B. Layton, M.D., M.P.H.  
*Assistant Director*, F. S. Parney, M.D.  
*Blindness Control Division, Chief*, J. H. Grove, M.D.  
*Child and Maternal Health Division, Chief*, Ernest Couture, M.D., C.M.  
*Civil Aviation Medicine Division, Chief*, W. A. Prowse, M.D., C.M., D.P.H.  
*Civil Service Health Division, Chief*, R. G. Ratz, M.B.  
*Dental Health Division, Chief*, H. K. Brown, D.D.S., D.D.P.H.  
*Epidemiology Division, Chief*, A. F. W. Peart, M.B.E., M.D., C.M., D.P.H.  
*Hospital Design Division, Chief*, H. G. Hughes, B.Arch., A.R.I.B.A., M.R.A.I.C.  
*Industrial Health Division, Chief*, K. C. Charron, M.D.  
*Industrial Health Laboratory, Chief*, K. Kay, M.A., Ph.D.  
*Laboratory of Hygiene, Chief*, J. Gibbard, B.S.A., S.M., F.R.S.C.  
*Mental Health Division, Chief*, C. A. Roberts, M.D., C.M., L.M.C.C.  
*Narcotic Control Division, Chief*, K. C. Hossick.  
*Nutrition Division, Chief*, L. B. Pett, B.S.A., M.A., Ph.D., M.D., C.P.H.  
*Public Health Engineering Division, Chief*, J. R. Menzies, B.A.Sc., O.L.S., C.E.  
*Quarantine, Immigration Medical and Sick Mariners Services, Chief*, H. D. Reid, M.D.

INDIAN HEALTH SERVICES—*Director*, P. E. Moore, M.D., D.P.H.  
*Assistant Directors*, H. A. Proctor, M.D.: O. Leroux, M.D.

**WELFARE BRANCH**

*Executive Assistant (Welfare), Mrs. D. B. Sinclair, O.B.E., B.A., M.A., LL.D.*

**FAMILY ALLOWANCES AND OLD AGE SECURITY DIVISIONS,** *National Director, R. B. Curry, B.A., LL.B.*

**OLD AGE ASSISTANCE DIVISION**—*Director, J. W. MacFarlane.*

**PHYSICAL FITNESS DIVISION,** *Assistant Director, Doris W. Plewes, M.A., B.Paed., Ed.D.*

**CIVIL DEFENCE**

*Co-ordinator, F. F. Worthington, C.B., M.C., M.M. (and Bar).*

*Deputy Co-ordinator and Director of Operations and Training, J. C. Jefferson, C.B., D.S.O. (and Bar), E.D.*

*Chief Administrative Officer, M. P. Cawdron, M.A., B.Sc.*

**ADMINISTRATION BRANCH**

*Secretary's Division, Departmental Secretary, Miss O. J. Waters.*

*Information Services Division, Acting Director, H. S. Robinson, M.A., LL.B., E.D.*

*Legal Division, Legal Adviser, R. E. Curran, Q.C., B.A., LL.B.*

*Library, Departmental Librarian, Miss M. D. Morton, B.H.Sc., B.L.S.*

*Personnel Division, Chief, H. S. Hodgins, M.B.E., B.A.*

*Purchasing and Supply Division, Chief, J. A. Hickson.*

*Research Division, Chief, J. W. Willard, M.A., M.P.A., A.M.*

---

*Translation Office,  
Chief, G. A. Sauvé.*

*Chief Treasury Officer,  
T. F. Phillips.*

**DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS****ADMINISTRATIVE OFFICES**

OTTAWA—Jackson Building, Bank and Slater Streets

**FAMILY ALLOWANCES AND OLD AGE SECURITY REGIONAL OFFICES**

ST. JOHN'S, Nfld. ....	29 Buckmasters' Field
CHARLOTTETOWN, P.E.I. ....	59 Queen Street
HALIFAX, N.S. ....	Industrial Building
FREDERICTON, N.B. ....	Federal Building
QUEBEC, Que. ....	51 Boulevard des Capucins
TORONTO, Ont. ....	122 Front Street West
WINNIPEG, Man. ....	Lindsay Building
REGINA, Sask. ....	Saskatchewan Motors Building, Broad Street
EDMONTON, Alta. ....	10201, 100th Street
VICTORIA, B.C. ....	Federal Building

**FOOD AND DRUG LABORATORIES**

OTTAWA, Ont. ....	35 John Street
HALIFAX, N.S. ....	Dominion Public Building, (P.O. Box 605)
MONTREAL, Que. ....	379 Common Street
TORONTO, Ont. ....	65 Victoria Street
WINNIPEG, Man. ....	Aragon Building, 244 Smith Street
VANCOUVER, B.C. ....	Federal Building, 325 Granville Street.

**INDIAN HEALTH SERVICES****Hospitals**

PRINCE RUPERT, B.C. ....	Miller Bay Indian Hospital
NANAIMO, B.C. ....	Nanaimo Indian Hospital
SARDIS, B.C. ....	Coqualeetza Indian Hospital
†CARDSTON, Alta. ....	Blood Indian Hospital
EDMONTON, Alta. ....	Charles Camsell Indian Hospital
GLEICHEN, Alta. ....	Blackfoot Indian Hospital
HOBBEMA, Alta. ....	Hobbema Indian Hospital
FORT QU'APPELLE, Sask. ....	Fort Qu'Appelle Indian Hospital
NORTH BATTLEFORD, Sask. ....	North Battleford Indian Hospital
HODGSON, Man. ....	Fisher River Indian Hospital
PINE FALLS, Man. ....	Fort Alexander Indian Hospital
NORWAY HOUSE, Man. ....	Norway House Indian Hospital
*BRANDON, Man. ....	Brandon Indian Hospital
*SELKIRK, Man. ....	Dynevor Indian Hospital
*THE PAS, Man. ....	Clearwater Indian Hospital
MOOSE FACTORY, Ont. ....	Moose Factory Indian Hospital
OHSKEWEN, Ont. ....	Lady Willingdon Indian Hospital
SIOUX LOOKOUT, Ont. ....	Sioux Lookout Indian Hospital

### Nursing Stations

CAPE DORSET, N.W.T.	OXFORD HOUSE, Man.
COPPERMINE, N.W.T.	BIG TROUT LAKE, Ont.
FORT McPHERSON, N.W.T.	LAC SEUL, Ont.
FORT NORMAN, N.W.T.	LANSDOWNE HOUSE, Ont.
BROCKET, Alta. (Peigan)	MANITOWANING, Ont.
DRIFTPILE, Alta.	OSNABURGH HOUSE, Ont.
MORLEY, Alta. (Stony)	PIKANGIKUM, Ont.
SADDLE LAKE, Alta.	SQUAW BAY, Ont.
LAC LA RONGE, Sask.	BERSIMIS, Que.
LEASK, Sask.	FORT CHIMO, Que.
CROSS LAKE, Man.	FORT GEORGE, Que.
GOD'S LAKE, Man.	PORT HARRISON, Que.
GYPSPUMVILLE, Man. (Little Saskat- chewan)	RUPERT'S HOUSE, Que.
ISLAND LAKE, Man.	ESKASONI, N.S.
NELSON HOUSE, Man.	†TOBIQUE, N.B.
	Moose Factory Indian Hospital

† Departmental hospitals staffed by religious orders on stipend.

\* Departmental Sanatoria staffed and operated by the Sanatorium Board of Manitoba, with reimbursement on a per diem basis.

### Health Centres

AKLAVIK, N.W.T.	VERNON, B.C.
CHESTERFIELD INLET, N.W.T.	WILLIAMS LAKE, B.C.
CORAL HARBOUR, N.W.T.	CARDSTON, Alta.
FORT RAE, N.W.T.	CALGARY, Alta.
FORT RESOLUTION, N.W.T.	FORT SMITH, Alta.
FORT SIMPSON, N.W.T.	GOOD FISH LAKE, Alta.
PANGNIRTUNG, N.W.T.	SAINT PAUL, Alta.
WHITEHORSE, Y.T.	ONION LAKE, Sask.
Carmacks (seasonal)	PRINCE ALBERT, Sask.
Teslin (seasonal)	PUNNICHY, Sask.
ALERT BAY, B.C.	ELPHINSTONE, Man.
BRENTWOOD, B.C.	ROSSBURN, Man.
CEEPEEECEE, B.C.	SANDY BAY, Man.
DUNCAN, B.C.	THE PAS, Man.
FORT ST. JAMES, B.C.	WINNIPEG, Man.
GREENVILLE, B.C.	CHAPLEAU, Ont.
HAZELTON, B.C.	CHRISTIAN ISLAND, Ont.
KAMLOOPS, B.C.	DESERONTO, Ont.
KINCOLITH, B.C.	KENORA, Ont.
LILLOOET, B.C.	MUNCEY, Ont.
MERRITT, B.C.	PORT ARTHUR, Ont.
NEW WESTMINSTER, B.C.	SARNIA, Ont.
PORT EDWARD, B.C.	SAULT STE. MARIE, Ont.
PORT SIMPSON, B.C.	ST. REGIS, Ont.
PRINCE RUPERT, B.C.	WALPOLE ISLAND, Ont.
VANCOUVER, B.C.	

**Health Centres—Conc.**

AMOS, Que.	NOTRE DAME DU NORD, Que.
Manowan (seasonal)	POINTE BLEUE, Que.
Mistassini (seasonal)	RESTIGOUCHE, Que.
Obedjiwan (seasonal)	SEVEN ISLANDS, Que.
Waswanipi (seasonal)	KINGSCLEAR, N.B.
CAUGHNAWAGA, Que.	ROGERSVILLE, N.B.
LORRETTEVILLE, Que.	SHUBENACADIE, N.S.
MANIWAKI, Que.	SYDNEY, N.S.
Rapids Lake (seasonal)	LENNOX ISLAND, P.E.I.

**INDUSTRIAL HEALTH LABORATORY**

OTTAWA—200 Kent Street

**LABORATORIES OF HYGIENE**

OTTAWA—45 Spencer Street

KAMLOOPS B.C.

**PUBLIC HEALTH ENGINEERING DISTRICT OFFICES**

MONCTON, N.B. ....	General Motors Building
MONTREAL, Que. ....	Room 107, Postal Station "B"
ST. CATHARINES, Ont. ....	4th Floor, Dominion Building
PORT ARTHUR, Ont. ....	Room 1, Customs Building
WINNIPEG, Man. ....	207 Scientific Building, 425½ Portage Avenue
EDMONTON, Alta. ....	Room 406, Post Office Building
VANCOUVER, B.C. ....	Begg Building, 1110 West Georgia Street
WILLIAM HEAD, B.C. ....	Quarantine Hospital

**IMMIGRATION MEDICAL SERVICE OFFICES****Canada**

GANDER, Nfld. ....	Gander Airport
HALIFAX, N.S. ....	Immigration Building, Pier 21
MALTON, Ont. ....	Malton Airport
MONCTON, N.B. ....	Moncton Airport
MONTREAL, Que. ....	Immigration Building, 1162 St. Antoine Street and Dorval Airport
QUEBEC, Que. ....	Immigration Hospital, Quebec West
SAINT JOHN, N.B. ....	Pier 9, Immigration Building
STEPHENVILLE, Nfld. ....	Harmon Field Airport
VANCOUVER, B.C. ....	Immigration Building, foot of Burrard Street
VICTORIA, B.C. ....	Immigration Building.

**Overseas****British Isles—**

LONDON, England .....	42-46 Weymouth Street, Marylebone, W.1.
BELFAST, Northern Ireland ..	65 Chichester Street
GLASGOW, Scotland .....	18 Woodlands Terrace, C.3.
LIVERPOOL, England .....	34 Moorfields, Lancs. 1.

**Continent—**

BRUSSELS, Belgium .....	230 Rue Royale
PARIS, France .....	38 Avenue de l'Opera
ROME, Italy .....	Via Nemorense, 90
THE HAGUE, Holland .....	23 Alexanderstraat
COPENHAGEN, Denmark ...	Vestagervej 5
STOCKHOLM, Sweden .....	Smala Grand 5
LINZ, Austria .....	Canadian Government Immigration Mission, Promenade, 24

**KARLSRUHE, Germany (U.S.**

Zone) .....	Canadian Government Immigration Mission, Lutz Hotel Building, 94 Krieg Strasse
-------------	---

**BREMEN, Germany (British**

Zone) .....	Canadian Government Immigration Mission, Bremer Ueberseeheim, Niedersacsendamm, Bremen-Neustadt
-------------	---

**HANOVER, Germany (British**

Zone) .....	10 Kirchroederstrasse.
-------------	------------------------

**SICK MARINERS CLINICS AND HOSPITALS**

HALIFAX, N.S. ....	Immigration Building, Pier 21
SYDNEY, N.S. ....	Marine Hospital
LUNENBURG, N.S. ....	Marine Hospital
SAINT JOHN, N.B. ....	Pier 9
QUEBEC, Que. ....	Louise Basin
MONTREAL, Que. ....	379 Common Street
VANCOUVER, B.C. ....	Immigration Building

**QUARANTINE STATIONS AND SUB-STATIONS**

HALIFAX, N.S. ....	Rockhead Hospital
SAINT JOHN, N.B. ....	Quarantine Hospital
QUEBEC, Que. ....	Louise Basin and Quarantine Hospital, Quebec West
MONTREAL, Que. ....	379 Common Street and Dorval Airport
VANCOUVER, B.C. ....	Immigration Building
VICTORIA, B.C. ....	William Head, B.C.
GANDER, Nfld. ....	Gander Airport
THREE RIVERS, Que. ....	Sub-stations under direction of Quarantine Officer in Charge at Quebec. There is a Quarantine Officer appointed in each port.
SOREL, Que. ....	
RIMOUSKI, Que. ....	
PORT ALFRED, Que. ....	

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CANADA

DEPARTMENT OF NATIONAL HEALTH AND WELFARE

# ANNUAL REPORT

*for the fiscal year  
ended March 31  
1953*

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CANADA

THE DEPARTMENT OF  
NATIONAL HEALTH AND WELFARE

# ANNUAL REPORT

FOR THE FISCAL YEAR  
ENDED MARCH 31

1953

Edmond Cloutier, C.M.G., O.A., D.S.P.,  
Printer to the Queen's Most Excellent Majesty  
Ottawa, 1953



*To His Excellency the Right Honourable Vincent Massey, C. H., Governor-General and Commander-in-Chief of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

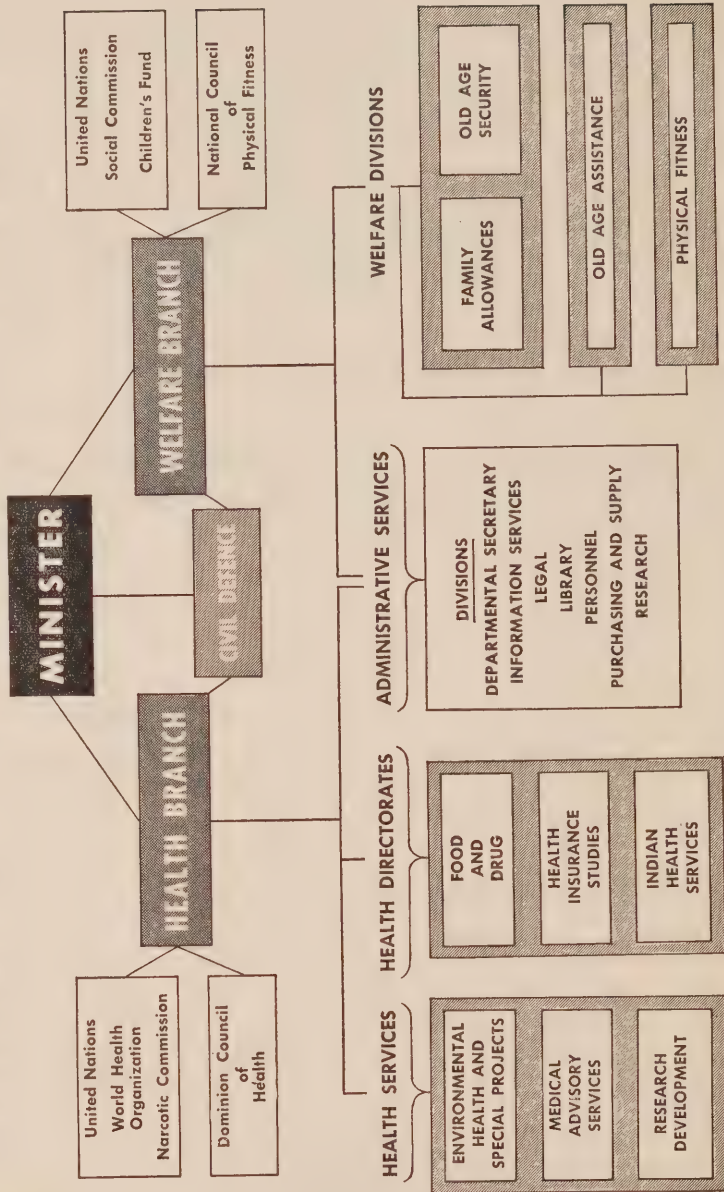
The undersigned has the honour to present to Your Excellency the Annual Report of the Department of National Health and Welfare for the fiscal year ended March 31, 1953.

Respectfully submitted

PAUL MARTIN,  
*Minister of National Health and Welfare.*

OTTAWA, April 1, 1953.

# DEPARTMENT OF NATIONAL HEALTH AND WELFARE



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*To the Honourable Paul Martin, Q.C., M.P., LL.D., Minister of National Health and Welfare, Ottawa.*

SIR:

For the fiscal year under review, the widening scope of the Department's activities is indicated by the increase of some \$250,000,000 in the amounts voted by Parliament for its work. This increase was accounted for largely by the fact that 1952-53 was the first full year of operation of the new three-part program embracing Old Age Security, Old Age Assistance and Allowances for the Blind.

Other significant developments contributing measurably to the increase in departmental appropriations included the additional \$12,000,000 required for Family Allowances payments to keep pace with the nation's steadily rising population; the wider utilization by the provinces of federal grant moneys available under the National Health Program; the increase of nearly \$2½ millions in appropriations for Indian Health Services; and, finally, the initiation of a system of grants-in-aid to assist the provinces in developing civil defence projects, for which an amount of \$1,400,000 was set aside.

During the year under review, steady progress was evident in the various areas of departmental responsibility for health, welfare and civil defence. On the health side, the Department continued to carry out its traditional statutory responsibilities for such matters as the control of food and drugs; the maintenance of proper sanitary standards on trains, aircraft, and ships; the medical examination of prospective immigrants; the maintenance of a central laboratory of hygiene; and so on. Through its specialist advisory divisions, the Department also continued to provide a wide variety of consultative services to provincial departments of health and to various voluntary agencies.

Particular mention should be made of the intensive work which went into the preparation of new food and drug legislation which, at year's end, had received approval in the Senate and awaited introduction in the House of Commons (passed in the House of Commons April 21, 1953). The new Food and Drug Act, which will come into force on proclamation, will supersede all previous legislation in this field and will consolidate the many amendments and regulations made under the old legislation over a period of years.

Reference should also be made to the marked expansion in the facilities and services provided for the health care of Indians and Eskimos. During the year there has been a further encouraging decline in the death rate from tuberculosis, the greatest single threat to the health of Canada's native population.

On the welfare side, the outstanding development of the past year was the successful implementation, with the co-operation of the provinces, of the new three-part program to replace the Old Age Pensions Act of 1927. At March 31, 1953, 782,134 Canadians were benefiting under the three new measures.

Under the Old Age Security Act, 686,127 persons 70 and over were receiving payments of \$40.00 a month, administered and financed entirely by the Federal Government without means test of any kind. Another 87,675 persons in need between 65 and 69 years of age were receiving old age assistance payments, administered by the provinces with the costs shared equally by the federal and provincial governments. Under the Blind Persons Act, 8,332 blind persons 21 years of age and over were in receipt of allowances administered

by the provincial governments, with the Federal Government bearing 75 per cent of the costs. Federal payments under these three measures totalled \$345,255,669.68 for the fiscal year under review.

At year's end, the National Health Program, inaugurated in May, 1948, approached its fifth anniversary. Under this Program, some \$94,000,000 has been granted to the provinces to assist them in surveying their present health facilities and future health needs, in overcoming serious shortages in hospital accommodation and in improving public health services and facilities in various fields of activity.

One of the outstanding features of this Program has been the support given to more than 400 individual hospital construction projects to provide some 46,000 additional hospital beds; 5,900 bassinets for infants; 5,700 beds in nurses' residences; and various public health facilities in hospitals considered, for grant purposes, to be the equivalent of 2,600 beds. Other notable achievements include the training of nearly 5,000 specialized health workers and the employment of an additional 4,700 on provincial and local health staffs; the financing of more than 200 health research projects in various fields; and the strengthening of provincial and municipal health services. As a result, the provinces generally have been able to intensify their campaigns against major health hazards such as cancer, tuberculosis and mental illness and to lay foundations for the introduction of health insurance.

As in the past, the Department has continued to work closely with the various voluntary agencies and professional groups in the health and welfare fields, and, during the year, effective two-way co-operation has been in evidence. With the appropriate agencies of the ten provincial governments, the Department has also enjoyed the most cordial and understanding relationships.

The Department's greatly augmented administrative responsibility, reflected in its increased appropriations for the year under review, was successfully assumed with a very modest increase in staff. At March 31, 1953, the total staff reached 3,428—an increase of 207 over the preceding fiscal year. Of this number, 137 or 66 per cent were doctors, nurses and other health workers to staff the Department's expanded health services for Indians and Eskimos. It is worthy of note that only eight persons, or less than four per cent of the total increase in personnel, were added to the Department's administrative staff. This evident economy of staff is a tribute to the loyalty and efficiency of the individual members of the Department who carried out their duties with commendable effectiveness.

Respectfully submitted,

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and Welfare (Health)*

G. F. DAVIDSON,  
*Deputy Minister of National Health  
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OTTAWA, April 1, 1953.

# HEALTH BRANCH

## Introduction

### Administration

The Health Branch continued to discharge its statutory responsibilities and in addition worked with and through provincial, municipal and voluntary organizations in Canada.

Some changes in the organization of the Health Branch have taken place, particularly with respect to administration of Health Services. For administrative purposes, and according to their functions, the various Divisions under Health Services have been divided into three broad groups, each under the direction of a Principal Medical Officer. These groups, with their respective Divisions are as follows: Environmental Health and Special Projects, Medical Advisory Services, and Research Development.

Three Directorates within the Health Branch remain unchanged—Food and Drugs, administering the Food and Drugs Act and Proprietary or Patent Medicines Act; the Directorate of Health Insurance Studies, applying grants provided under the National Health Program, as well as carrying on a continuing health insurance planning assessment; and the Directorate of Indian Health Services, providing preventive services and medical and hospital care for Indians and Eskimos.

### Health Trends and Developments

Published reports from health authorities in Canada and from other countries over the past few years have served to indicate the important trends and developments occurring within the health field. Many pressing health problems of the past few decades have been successfully dealt with and others now being attacked will undoubtedly be favourably influenced in the years that lie ahead. This section deals with only a few of the problems which are prominent at the present time and are under investigation by public health authorities in Canada.

Modern methods of prevention and improved treatment procedures have effectively reduced the incidence and mortality of many communicable diseases. The death rate due to tuberculosis, formerly one of the foremost killers of mankind, has fallen to a new low in Canada, namely, 18 per 100,000 in 1952. Maternal mortality and infant mortality rates have continued to decline, the maternal mortality rate for 1951 being 1.1 per 1,000 live births and infant mortality rate 38 per 1,000 live births. While our infant mortality rate is still high, this general decline is in keeping with changes occurring in other countries with comparable standards of medical care.

Man has made no more worthwhile advance than preventing disease and prolonging life. The success of medical care and health programs should be evaluated in a positive manner by the number of years the average person enjoys good health and not by the number of deaths recorded annually.

Estimated life expectancy in Western Europe in the 16th Century was 19 years; in the 17th Century—25 years; in the 18th Century—32 years. On this continent life expectancy in the 19th Century averaged 40 years. At the beginning of this Century the average had increased to 49 years and by the end of the first quarter of the 20th Century the average had increased to 57 years for males and approximately 60 years for females. In Canada, by 1947, the increase in life expectancy at birth had extended to 65.18 years for males and 70.05 years for females.

This trend in life expectancy has posed a host of new problems relating to the medical care of the elderly. This special field of medicine, "Geriatrics",

has made tremendous advances, especially in the United Kingdom, since 1945. Health administrators in Canada are becoming increasingly aware of their responsibilities in this relatively new field of caring for the aged. Having escaped the hazards of infancy and childhood, men and women enter upon a period of life when they are confronted by hazards of a different character, when degenerative diseases begin to take their toll and this trend in life expectancy, therefore, calls for a new emphasis in our health program.

### *Cancer*

There has been an apparent increase in the cancer rate over the past few years. In 1931 malignant neoplasms came third in the list of importance as a cause of death in the community. In 1951, these same diseases had climbed to the second position on the list. As we know, malignant disease is especially prevalent amongst older people. While in 1931 the diseases which came second on the list were those classified under "Diseases of Early Infancy and Congenital Deformity", these conditions are now fourth on the list of all causes of death. These dry statistics tell the tale of many lives of infants saved by improved medical care.

Sellers and Mackay in 1951<sup>1</sup> pointed out that the trend in mortality from cancer is difficult to determine. Nevertheless, certain trends appear to be apparent. Compared with twenty years ago crude rates indicate that more deaths per year are ascribed to cancer. In terms of actual numbers of deaths this is correct, but when rates are adjusted to a constant sex and age composition, the increase is not so marked. This is shown by the following figures for Canada in 1931-1951:

1931 Crude Cancer Death Rate.. 92.4 per 100,000

1951 Crude Cancer Death Rate—123.6 per 100,000

1951 Death Rate Standardized to 1931 population— 98.7 per 100,000.

These figures suggest that there is a slight increase in deaths from cancer during the last twenty years, but whether this is a real increase or whether it is merely due to increasing accuracy in diagnosis and certification is an argument which cannot be settled at the present time. There does seem, however, to be a slight increase in cancer death rates in all age groups as is shown in the following table on Age Specific Death Rates for Canada, comparing 1931 and 1951:

<i>Ages</i>	<i>1931</i>	<i>1951</i>
0-5 .....	3.5	5.3
5 .....	2.6	3.0
10 .....	2.1	4.3
15 .....	3.7	5.1
20 .....	5.7	6.8
25 .....	8.8	10.1
30 .....	19.5	21.5
35 .....	35.2	39.3
40 .....	66.4	68.0
45 .....	122.9	123.2
50 .....	186.6	195.5
55 .....	295.4	302.7
60 .....	421.1	438.9
65 .....	580.1	599.5
70 .....	797.7	812.8
75 .....	1,029.4	1,137.2
80 .....	1,130.1	1,353.4
85 .....	1,218.8	1,571.1
90 .....	918.0	1,515.9

It will be seen in this table that the differences are more marked in the older age groups than in childhood. As far as the apparent increase in childhood is concerned, it is possible that such an increase is a statistical artificiality, in the sense that, whereas in years gone by many children died of infectious diseases, certain of those children would have died of cancer at a later age if they had not succumbed to the infectious disease in question. It might be that it is this equivalent residual number of children who were harbouring early neoplasms who are now shown to have died of malignant disease. This suggestion is again only of a tentative nature and will be supported or disproved by future trends.

In his discussion of cancer mortality trends in different countries, McKinnon (1950)<sup>2</sup>, concludes that there is no particular evidence that present cancer campaigns have as yet to any extent influenced death rates from this disease. This is indeed a sobering thought in the face of the large and increasing expenditures on cancer control. Further critical evaluation of the effects of such cancer preventive programs should be carefully and rigorously supported.

### *Influenza*

This is one of the principal communicable diseases commanding the attention of scientists in the health and allied fields. Since the influenza virus was first isolated in 1933, considerable laboratory and epidemiologic experimentation has been carried out in testing the value of influenza vaccine.

In 1943 a Commission on Influenza established by the United States Army vaccinated 12,500 university students in different parts of the United States. The vaccine contained Influenza Types "A" and "B". An epidemic of Influenza Type "A" occurred during the clinical trial and the experimentors were satisfied that the vaccine had given a significant protection against Influenza "A". Similar protection with this bivalent vaccine was reported by Francis and Salk during the epidemic of Influenza "B" in 1945. However, in 1947 during an epidemic of Influenza "A" Prime, this vaccine showed no protective value.

From these various studies it became evident that two main problems were paramount in the protection of individuals by influenza vaccination. These are related to the degree and duration of immunity induced in the individual by vaccination, and to the adequacy of this immunity in respect to the entire antigenic spectrum for various types and strains of influenza. In 1951 Salk used mineral oil adjuvants with inactivated influenza virus, and with this vaccine was able to demonstrate higher antibody levels in monkeys than with vaccines prepared in aqueous solution. Similar responses were also induced by Salk in humans in 1952. Not only were higher antibody levels demonstrated, but a breadth of antibody response to type "A" strains not included in the vaccine and the persistence of this response was also shown.

In Canada a Committee on Influenza was established in 1951 to advise the Department of National Health and Welfare on influenza prevention and control. In the fall of 1951 and winter of 1952 field trials were carried out by the Department using Lederle's quadrivalent vaccine (PR8, FM1 Cuppette and Lee strains). Approximately 800 persons were included in these trials, about half of whom received vaccine and the remainder normal saline. Insufficient cases of influenza occurred to provide a valid clinical trial; however, complement fixing and haemagglutinating antibody levels were determined before vaccination, two to three weeks later, and finally three months after vaccination. Vaccine from the same lot was used the following winter on a group of medical students to compare their antibody response with that of individuals in the older age group. Results of these trials will be published later this year (1953).

During the winter of 1952-53 the Defence Research Board provided the Department with 4,600 doses of quadrivalent influenza vaccine (PR8, FM1, Cuppette and Lee strains), which was produced at the Connaught Medical Research Laboratories. This, along with 4,300 controls of normal saline, was distributed throughout Canada by Provincial Health Departments. Although Influenza "A" Prime was prevalent in the Southern and Western United States, Europe, and the Far East, this infection, according to reports, apparently was not widespread in this country.

With the chain of influenza information centres created by the W.H.O., an organization now exists which provides rapid information concerning the incidence and distribution of influenza. The value and efficiency of this organization was tested during the influenza pandemics of 1950-51 and 1952-53. Provided that rapid information regarding the antigenic structure of the current prevalent strains reaches unaffected countries in time, an effective influenza vaccine, if available, can be employed for the protection of key personnel. Unfortunately, the influenza virus can spread rapidly throughout the world by means of air transport and can become well established in a population before its presence is recognized. However, with the continued efforts of countries participating in the overall W.H.O. program to improve vaccines which will cover a broad antigenic spectrum, the future protective value of influenza vaccine is promising. Canada and Canadian investigators are playing active roles in the development of this program.

### *Poliomyelitis*

Another communicable disease which is prominent in health investigations is poliomyelitis. The pessimism which long prevailed concerning the chances of preventing paralytic poliomyelitis has been modified by the discovery of two main factors. The first is the realization that poliomyelitis is a common, widespread disease, with the development of paralysis occurring as an occasional, but uncommon, complication. The second is the discovery that poliomyelitis virus is not, in fact, strictly neurotropic as had been thought but, in common with other viruses, causes a throat and intestinal infection in the early stages of the disease and probably spreads to the nervous system via the blood, thereby allowing the possibility of preventing this extension by setting up an antibody barrier in the blood stream.

Although earlier work by Flexner and Stewart in 1928, and later by Rhoads, Enders, Bodian, Howe, and others, demonstrated passive protection of monkeys with convalescent serum and gamma globulin, the first practical proof of the possibility of success in setting up this antibody barrier was the work of Hammon and associates in 1951 and 1952. Hammon inoculated a large number of children (54,772) with gamma globulin, causing a significant reduction in the occurrence of paralytic symptoms.

Since the controlled field trials of Hammon, public health and medical authorities have had some concern about the limited supply of gamma globulin that would be available for the poliomyelitis season in 1953. The Department of National Health and Welfare, therefore, agreed to give financial assistance to the Connaught Medical Research Laboratories to facilitate the production of gamma globulin in Canada. In spite of the limited time at their disposal before the poliomyelitis season, and various production problems, the Connaught Laboratories expect to produce approximately 25,000, 5 c.c. doses by the early fall (1953). This will be allocated to Provincial Health Departments, on the basis of need, by the gamma globulin committee set up by the Department, and will be distributed to areas having an unusually high incidence of paralytic poliomyelitis.

The use of gamma globulin, however, presents practical difficulties, which limits this method of conferring passive immunity and hinders it from becoming the answer to the problem of preventing paralytic poliomyelitis in large populations. The first is the physical difficulty of producing a sufficient volume of gamma globulin and the second is the comparatively short duration of the immunity conferred (5 weeks).

It would seem, therefore, that our hope of eventual success lies in the direction of active immunity, by means of either an attenuated or inactivated vaccine. Salk and associates have recently published promising results obtained from inoculating 161 persons with formaldehyde inactivated vaccine prepared in tissue culture, given intradermally in aqueous solution, and intramuscularly in a water-mineral-oil emulsion, which appeared to have an adjuvant effect. Significant rises in antibody levels to the three antigenic types are reported but, of course, the degree of permanency is not yet known. Owing to the need for rigorous tests before each batch of vaccine can be safely used, it will be some time before these vaccines are available in any quantity.

Fortunately, in Canada, Dr. Andrew Rhodes, of the Connaught Medical Research Laboratories, and the Laboratory of Hygiene have participated in the development of polio-typing facilities, using tissue culture methods. Dr. Rhodes is also well advanced in polio vaccine production methods. Such facilities will be valuable to the country as a whole and can be used for testing the antigenicity of polio vaccine, as well as immunity developed from attacks of the disease.

#### *Fluoridation*

Mention may be made of a significant advance in another field—the fluoridation of water supplies. By April, 1953, there were eight Canadian communities fluoridating their municipal water supplies to reduce the incidence of tooth decay. Several others are reported as making preparations which may lead to fluoridation by the end of the year. The Brantford-Sarnia-Stratford Water Fluoridation Caries Study being conducted by this Department continues to yield very encouraging evidence. In January, 1953, the Canadian Dental Association and the Canadian Medical Association, after examining this and other evidence, issued an official joint statement saying that they were convinced that water fluoridation brought about a considerable reduction in dental caries and that no ill effects had been detected from the concentrations of fluorides in use for this purpose.

#### *Pesticides*

One further field warranting recognition is that concerned with the use of pesticides. As a result of wartime chemical developments, a revolutionary change in the types of pesticides used in Canada took place after the war. The new compounds were found to be not only more effective against insects but more potentially toxic to man than the older classes of chemicals previously employed. One class, the rapid-acting organic phosphate insecticides, had been developed from a class of chemicals exploited during wartime as offensive chemical warfare agents.

The chlorinated hydrocarbon insecticides, of which DDT was the first notable example, were found to possess the typical specific effects of carbon tetrachloride, trichlorethylene, and others of this class which had been recognized for many years as an important source of occupational disease among industrial workers. During the past few years many reports of ill effects to orchard and field workers have confirmed the toxic potentialities of these new chemicals. Thus, public health authorities were faced with a problem heretofore of minor proportions. Careful review of proposed new compounds and close control of licensing at federal level become necessary. This has been

accomplished by setting up a National Health Pesticide Committee composed of experts in such aspects as environmental hazards, clinical problems, food contamination, labelling. The Committee advises the Department of Agriculture and thereby assists in ensuring that new pesticides brought into use in Canada may not possess excessive hazard to the exposed public.

### *References*

1. Sellers, A. H., Mackay, E. N., (1951), Ontario Cancer Treatment and Research Foundation Annual Report, Toronto.
2. McKinnon, N. E., (1950), Cancer Mortality Trends in Different Countries, Canadian Journal of Public Health, Volume 41, page 230.

## **Dominion Council of Health**

The Dominion Council of Health, consisting of the Chief Health Officers of each of the provinces and five appointees of the Governor in Council and originally created in 1919, continues to function as the principal advisory body to the Minister.

In the period under review the Council held three meetings. Much of the discussion related to problems arising in connection with the administration of the National Health Program. The achievements of the first five years of its operation were reviewed and consideration given to the areas into which the Program might be appropriately extended.

Other important health problems of national interest were discussed, including the provision and distribution of gamma globulin as a protective agent in poliomyelitis, the control of marketing of new drugs, toxic chemicals used as cleaning fluids, insecticides and the health aspects of Civil Defence planning.

## **International Health**

Canada is a member of the World Health Organization, a specialized agency of the United Nations. The Department, which nominates the Canadian delegations to the annual World Health Assemblies, maintains a close interest in the work of the Organization, and endeavours, through its delegations, to ensure the development of sound and practical programs.

The Canadian delegation to the Fifth Health Assembly held in May 1952, was headed by Dr. O. Leroux, Assistant Director of Health Insurance Studies. Alternate delegates were Dr. W. H. McMillan, Member of Parliament for Welland, and Dr. J. T. Phair, Deputy Minister of Health for the Province of Ontario, Dr. T. C. Routley, General Secretary of the Canadian Medical Association, and Mr. Bruce Williams, Acting Permanent Delegate to the United Nations in Geneva, were advisers to the Delegation.

At the Fifth Health Assembly, Canada was elected to designate a member of the Executive Board of the Organization. Members are nominated by elected governments but serve in an independent capacity. Dr. Leroux was designated to serve this three-year appointment.

In addition a total of 10 senior officers of the Department and a number of other distinguished Canadians are now serving on Expert Advisory Panels set up by the Organization to render expert advice in various fields.

The Organization, in addition to its own program involving an annual expenditure of approximately 8½ million dollars, plans and co-ordinates international health work financed from the United Nations Expanded Program of Technical Assistance and the UNICEF.

During the year the Department was called upon for advice in connection with health projects being financed through the Colombo Plan Technical Assistance Program. These were mainly related to the provision of post-graduate training in Canada and the recruitment of experts for teaching posts in South-East Asia. A mission of senior public health administrators from India and Pakistan spent six weeks in Canada during May and June, studying public health organization and administration at federal, provincial and local level and in visiting university and hospital centres. It was hoped that in addition to gaining information which would be of practical value to them in developing their own health services, they would be able to assess ways in which Canada could assist them under the Colombo Plan. That the emphasis will probably be in the field of post-graduate training is indicated by the fact that at the end of the fiscal year thirty-five applications were under consideration for training in Canadian institutions.

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## FOOD AND DRUG DIVISIONS

Highlight of the year, in the field of food and drug control, was the presentation to Parliament, in December, 1952, of a Bill to amend the Food and Drugs Act.

The Food and Drugs Act and the Proprietary or Patent Medicine Act govern the safety, purity and quality, as well as the labelling and advertising, of all foods, drugs, therapeutic devices and cosmetics. Both Acts are administered by the Food and Drug Divisions of the Department, with advice, in the case of enforcement activity and the drafting of legislation and regulations, from the Department's Legal Division.

The Food and Drugs Act had its origin in the Adulteration Act which became effective on January 1st, 1875. This legislation has been the subject of continuous review and revision in the light of changing conditions and in 1951 was given further study. As a result of this study, suggestions were made by a committee consisting of officers of the Food and Drug Divisions and the Legal Division which formed the basis of a Bill to amend the Food and Drugs Act which was given approval by the Senate and received first reading in the House of Commons on December 16th, 1952.

This Bill embodies three kinds of changes: those which will clarify interpretation of the Act and arrange it in a more logical and rational order; those which will give additional powers deemed necessary for the protection of public health, by ensuring safe conditions of processing and recording of sale; and those considered necessary on a constitutional basis.

The regulations under the Food and Drugs Act requiring the submission of data by manufacturers regarding the safety of new drugs have been enforced throughout the year. Drug manufacturers must wait until their submission has been found to comply with the pertinent regulations before marketing new drugs. Submissions regarding 169 new drugs were reviewed from the inauguration of this control in September 1951 to March 31st, 1953, with 122 being reviewed in the current fiscal year. The Chief of the Laboratory Services with the assistance and advice of the Pharmacology and Toxicology Section, the Physiology and Hormones Section of the Ottawa laboratories, and the Biologies Control Section of the Laboratory of Hygiene, were largely concerned with the technical review of these submissions.

Effective working relationships with industry were maintained in the drafting of standards and regulations. The prescription drug regulations were the subject of considerable study and a number of conferences were held with representatives of the pharmaceutical profession and pharmaceutical manufacturers. The opinion of the medical profession as a whole and of those members of the profession on the panels of experts was also sought. It is hoped that the resultant draft regulations when completed and promulgated will receive the entire support of both professions.

The new standards of composition and quality for flour and bread which were the subject of much co-operative study last year have been included in the regulations. It is now permissible to sell enriched flour and bread anywhere in Canada and at present the great bulk of flour and bread on the Canadian market is enriched with vitamins. The enrichment program is optional, not mandatory, and any one of the kinds of flour or bread described in the regulations may be sold. In the preparation of these regulations attention was given to informative labelling. This is particularly evident in the labelling requirements for Brown Bread as compared to Whole Wheat Bread.

Regulations were also promulgated in 1952 which require that all cheese shall either be manufactured from pasteurized milk or be held under specified conditions for sixty days before being sold at retail. This measure is designed to protect the public from exposure to pathological organisms which have been found in fresh cheese made from unpasteurized milk. The Microbiology Section of the Ottawa laboratories has studied the problems associated with cheese manufacturing in detail and has presented at least fifteen illustrated lectures to interested groups.

During the year a constant check has been made for suspected adulteration of dairy products with vegetable fats and oils. This has necessitated the development of more refined and sensitive methods for detection of such adulteration.

Progress in technology has resulted in another medium of advertising being available in Canada. The scrutiny of commercials referring to foods and drugs for the Canadian Broadcasting Corporation formerly restricted to those for radio use has been extended to include those for use on television programs.

A laboratory was established this year in the inspection office in Sydney, N.S., to obtain more rapid examination of some kinds of import shipments at this port. The scheme for the use of scientifically-trained inspection staff has proved to be practical and satisfactory. It has also been possible to provide a limited number of automobiles to the inspection staff and as a result there has been more extensive coverage of some of the large inspectorial districts.

Constant liaison with other enforcement agencies is necessary if duplication and gaps in enforcement are to be prevented. In this connection, assistance of a technical or enforcement nature was given to a number of other government departments and agencies, including the Department of Agriculture, the Department of Fisheries, the Department of National Revenue, Crown Assets Disposal Corporation, and the Royal Canadian Mounted Police.

Canadian and International Standard preparations used in the assay of drugs were distributed to manufacturers and research institutions on request.

Since the Food and Drugs Act is international to the extent that it applies to imports, active collaboration must be maintained with other countries if the quality of imports is to be kept at satisfactory levels. The department takes an active interest in legislation and standards and methods of analysis of foods and drugs in effect in foreign countries and established by international or foreign authorities, including the World Health Organization, the United Nations Narcotic Commission, the British Pharmacopoeia Commission, the United States Pharmacopoeia Committee of Revision, the Association of Official Agricultural Chemists, and the United States Food and Drug Administration.

The Divisions have several panels or boards of experts to advise on technical and medical problems. These include: the Advisory Panel on Foods, the Advisory Panel on Drugs, the Advisory Board on Proprietary or Patent Medicines, and the Drug Advisory Committee. Members of all boards or panels are physicians, pharmacists or other scientists who are university professors, clinicians or technical people in industry. They are selected because of their knowledge and also because, in many instances, the advice of independent experts not in government service is of considerable advantage. Much of the work is carried on by correspondence, but the Drug Advisory Committee formerly known as the Canadian Committee on Pharmacopoeial Standards meets at least once a year, the last meeting having been held in Ottawa on November 24, 1952.

## Enforcement—Inspection Services

This organization, which is charged with the enforcement of the Food and Drugs Act and Regulations, could be termed the "eyes and ears" of the Food and Drug Divisions. The inspection services consist of twenty-seven inspectoral districts covering the ten provinces, having in each district one or more inspectors. A number of inspectoral districts is attached to each of the five regional offices. The 45 inspectors may be compared to shock troops. They are in contact with the public, retailers, wholesalers and manufacturers and must sense when things are wrong and set the machinery in motion which may affect the whole organization. The aim is to correct at the source and, to that end, the inspectors have authority to detain imports until evidence of compliance with the law is established. The inspectors, working under the direction of the regional directors inspect shipments of food and drugs at the port of entry and submit samples to the regional laboratory for analysis when there is cause for suspicion. Random samples of foods and drugs are also purchased on the domestic market and are submitted for analysis to the regional laboratories.

The usual enforcement activities include: examination of import shipments and domestic foods and drugs for compliance with the relevant Acts; advice to manufacturers, importers and retailers on the requirements for compliance; scrutiny of radio and television commercials referring to foods, drugs and cosmetics for the Canadian Broadcasting Corporation under terms of the Broadcasting Act; examination of labels and advertising; assistance to other divisions and departments of government and prosecutions for violations of the Acts.

Enforcement action may take one or more forms depending on the circumstances of each case, and may consist of warnings, seizures or prosecutions. During the year 954 warnings were issued, 36 seizures of stocks of foods or drugs were made and there were 140 prosecutions including voluntary payments under Section 26 of the Act. Seizures and prosecutions are the last resort and serious efforts are made to correct deficiencies at the manufacturing level by warnings and advice. A total of 18,020 radio and television commercials were reviewed and 6,765 labels and advertisements were examined.

The enforcement of the holding regulations concerning cheese made from unpasteurized milk has received increased attention following a change in the pertinent section of the Food and Drug Regulations. Non-observance of this storage provision has led to court action in two cases in recent months with a considerable number of cases in the course of preparation.

The investigation of the sanitation of Canadian flour mills which was initiated two years ago was continued. In the course of this work 63 mills were completely inspected for sanitation and general condition. Many specimens for microbiological examination were obtained at each mill. Marked improvement over former conditions was noted in most establishments.

Continued attention was devoted to food colours, some of which, in the past, had represented a definite health hazard and it was gratifying to find that no large problems presented themselves in this field during the year. Similarly, foreign exporters of dried fruit and nuts appear to be aware of Canadian standards for these products and appear to be guided in advance of actual shipping by this knowledge. Although significant problems have not been encountered in the field during the year the vigilance must be maintained if the cumulative effect of the previous effort in these fields is not to be lost.

The regulations require that antibiotics and certain biological preparations for human parenteral use, offered for sale in Canada, must be manufactured under suitable conditions and meet rigid specifications. In order to be assured that suitable conditions are maintained in establishments in which these prod-

ucts are manufactured, a Canadian licence is issued only after inspection of the premises by a representative of the Laboratory of Hygiene and there is assurance that the manufacturing processes are under competent direction. The manufacturing premises of each of the 48 Canadian licence holders are inspected periodically thereafter. Much effort is devoted to the sampling and inspection of such products as serums, vaccines, liver extract injectable, and insulin, by the personnel of the Food and Drug Divisions and the Laboratory of Hygiene. The work connected with the control of antibiotics has increased markedly because of the increased activity in this field in industry.

Some indication of the amount of enforcement activity may be obtained by examining tables 4, 5 and 6, pages 112, 113 and 114. When it is considered that the specimens mentioned include representative numbers of all types of foods, drugs and cosmetics, it becomes apparent that food and drug inspectors must be well-informed on many subjects. The diversity of problems encountered by inspectors is increasing steadily with new developments in industry, technology and commerce. During the year, shortage of staff was eased somewhat by the recruitment of five inspectors, the establishment of an inspection office in Kamloops, B.C., and the purchase of a number of automobiles for use in inspection. The provision of automobile transportation to a number of inspectors has increased their efficiency to a marked degree at small additional cost and has facilitated the prompt investigation of consumer complaints, which together with random sampling and organized surveys provide most of the clues for investigation. It is becoming increasingly difficult to recruit and retain personnel who are qualified to carry out inspection duties.

### Laboratory Services

Laboratory services consist of six laboratories. The central laboratory in Ottawa is employed chiefly in investigational and research work for the development of standards and methods of assay or the analysis of foods and drugs, and in the mode of action of drugs. It also carries out all assays requiring animal experiments and conducts special surveys of products. The central laboratory is divided into ten sections and a summary of the investigational work conducted in each section during the year is contained here.

There are laboratories attached to the five regional offices, each of which is equipped to analyze the majority of samples of foods and drugs collected by inspectors attached to the regional office. In addition, laboratory facilities have been established at Saint John, N.B., St. John's, Newfoundland, and Sydney, N.S., in connection with the Halifax laboratory, for the purpose of expediting the handling of imports. The regional laboratories collaborate with the central laboratory in the study of methods and standards.

Much of the analytical work done in the regional laboratories may be considered to be routine but the diversity of products which must be examined prevents the establishment of routine procedures of the type encountered in control laboratories in industry which are devoted to the study of a limited number and type of products. Again, the analysis of foods is becoming more complicated, because of the general realization that food must be conserved and, as a result, new foodstuffs and processes are constantly being developed. This activity extends to packaging and coating of products, all of which must be studied if the public health is to be guarded.

Vitamins are unstable under certain conditions and it is necessary that very close analytical control be exercised by the manufacturer if his pharmaceuticals are to meet labelled vitamin potency. It was evident from random sampling that many companies did not have proper control facilities and, as a result, a comprehensive survey of vitamin manufacturers was initiated.

Discussions with a number of manufacturers indicated that many were not aware of the need of control. For this reason an educational approach was taken in dealing with these cases. They were shown results of analyses of their products which had been purchased by food and drug inspectors at points across Canada and were advised that proper control would help maintain the potency of these products, thereby avoiding the possibility of court action. Only about 1% of products produced with proper control facilities were below potency while over 50% of products manufactured without proper control facilities did not meet labelled potency. A marked difference was noted in the stability of different vitamins in these products. Records indicate that there are more than 200 companies which manufacture or distribute products containing vitamins. The survey to date has included about 80% of these companies. (For further information see C.M.A.J. 68, 103-107, 1953.)

It was also evident from surveys conducted by the Pharmaceutical Chemistry Section that lack of proper control facilities in many drug manufacturing establishments was responsible for the production of adulterated products. In some cases these products were submitted to departmental agencies such as the Department of Veterans Affairs and the Department of National Defence for use in Department of Veterans Affairs hospitals and for the armed forces. Rechecking of products of previous offenders who had been warned, indicates that this method of approach has produced positive results.

### **Administrative Services**

Administrative services were re-organized during the year and in addition to the responsibility for the administrative functions of accounts, purchasing, stores and estimates, have assumed responsibility for the maintenance of index records, the labelling library, the information centre, the handling of matters relating to accommodation and the maintenance of a stenographic and clerical pool. These services are also responsible for the clerical controls pertaining to prosecutions and new drug submissions and for the clerical work connected with the preparation and finally informing the trade regarding changes, deletions and additions to the regulations.

The information centre in its fifth year of operation has prepared and distributed 11 Trade Information Letters and 26 Staff Information Letters, and issued weekly reports on detained imports of foods, drugs and cosmetics. The cataloguing of all drugs manufactured in Canada, including the collection of specimen labels, was continued during the year.

### **Proprietary or Patent Medicine Division**

The Proprietary or Patent Medicine Act, administered by the Proprietary or Patent Medicine Division, governs the manufacture and sale of secret formula prepared medicines offered to the Canadian public under proprietary or trade names.

Registration of any drug in this class is compulsory, and a licence must be obtained before the product is placed on the market. The manufacturer submits his qualitative and quantitative formula, stating his therapeutic claims and directions for use. This information is assessed and passed on by Medical Officers in the Department, and if the article otherwise meets the specifications of the Act registration may be effected.

The sale of all registered preparations is licensed on a year to year basis so that if experience in use or advances in medical knowledge make it apparent that it is not in the public interest to permit further sale a licence is refused.

Under this system of dual control by registration and licence, which has been in operation since 1919, worthless as well as harmful products are screened

out; promises of cures and false, exaggerated or misleading claims are prohibited. The dosage of potent drugs must be within strictly defined limits; alcoholic preparations must be sufficiently medicated so as to preclude their use as intoxicants. Narcotics, barbiturates, sulphas and prescription drugs are not allowed. Treatments for serious diseases are ruled out.

An Advisory Board of eminent physicians and pharmacologists, appointed by the Minister under Section 9 of the Act, prescribes what shall be deemed sufficient medication of medicines containing alcohol in excess of  $2\frac{1}{2}$  per cent to make them unfit for use as alcoholic beverages; also what shall be the maximum single and daily doses of any drug mentioned in or added to the schedule of the Act. The Board also advises as to the safety of other drugs, and investigates the suitability of unusual combinations.

During the year the registration of 3,387 preparations was reviewed. One hundred and thirty-two new medicines were examined for registration; seventy-eight were approved and fifty-four rejected. One thousand seven hundred and six labels, wrappers and newspaper advertisements were examined and criticized. In addition, approximately 8,369 radio commercials were reviewed in cooperation with the Canadian Broadcasting Corporation which requires that all radio announcements dealing with proprietary medicines be submitted and approved before broadcasting. Claims in these continuities which are considered to be false, misleading or exaggerated are marked for deletion or revision.

Samples were secured on the open market, and examined as to quality and quantity of drugs and labelling. In this connection the inspection services throughout Canada contributed by procuring samples and reporting irregularities in recommendations and methods of merchandising.

Throughout the year manufacturers were interviewed to discuss problems arising out of present requirements, and through these meetings cooperation of the trade has been maintained, resulting in improved standards of proprietary medicines in the interest of the public and in keeping with the spirit and intent of the Act.

Assistance was also extended to federal, provincial and other officials concerned with the administration of laws and regulations otherwise relating to the sale of such products.

### Laboratory Studies

The following are examples of the studies conducted in the various sections of laboratory services in the central laboratory at Ottawa. Much of the fundamental research forming part of these studies has been reported in scientific literature.

### Food Chemistry Section

A new group of substances known as polyoxyethylene compounds have recently been recommended for use as emulsifying agents in foods. A project was initiated to develop a satisfactory method for the determination of these compounds.

The behaviour of antioxidants, which are added to lard and shortening to prolong the shelf-life of these products, was studied when these shortening agents were incorporated into baked goods. A marked difference was found in the stability of these compounds. Some were destroyed immediately on mixing with the dough, while others were not affected by the entire baking process. These latter products were found to be effective in inhibiting the development of the undesirable flavours and odours in the finished product.

Approximately 200 processed foods were analysed for lead, zinc and copper.

A method based on the activity of the phosphatase enzyme which is present in unpasteurized dairy products was developed for the detection of cheese made from unpasteurized milk.

An intensive study has been initiated in the development of more accurate methods for the detection of foreign fats in dairy products. A promising procedure for the detection of vegetable oil has been evolved based on the tocopherol content. Many vegetable oils contain appreciable amounts of this compound while the concentration in butter is relatively low. Thus, the presence of these vegetable oils in butter can be detected by an increase in the tocopherol content of the product.

### Microbiology Section

This section has continued its program of obtaining factual data on the relative attainment of various food industries in the practice of sanitation.

A survey of the sanitary aspects of the cheese industry in two provinces and an examination of market cheese was conducted. Cheese was examined for extraneous matter and an inspection of the milk used in the manufacture of cheese as well as the conditions of manufacture in a number of cheese factories was made. Extensive bacteriological examinations of market cheese and of milk delivered to cheese factories were also carried out. The survey revealed a number of deficiencies which have been drawn to the attention of the industry and suggestions for correcting the situation have been proposed.

A second survey of the sanitation of representative flour mills and of the bacterial and extraneous matter content of flour indicated positive improvement since the first survey made in 1950. The number of mills with severe infestation was reduced and the removal or preclusion of extraneous matter in flour was more effective. The use of positive effective measures for control of insect infestation was more intensive and more widespread. Mills with severe insect infestation continued to produce flour with a correspondingly high microbial content, including certain species capable of causing spoilage of significance for flour products.

Practicable screening methods for the detection of certain common bacterial toxins in foods have been developed for use in food survey work. Studies ultimately aimed at a more ready recognition of staphylococcal enterotoxin are in an exploratory phase based on the separation of pure toxin by paper ionophoretic methods.

### Vitamin and Nutrition Section

As a result of criticism of the Morton and Stubbs correction procedure for the estimation of Vitamin A, a comparison has been made of potency obtained by this method, the uncorrected assay, and the antimony trichloride method with the results of biological assays. The Morton and Stubbs correction procedure was shown to be the most accurate method for the routine estimation of the Vitamin A content of fish liver oils.

The stability of Vitamin A in margarine has been studied during storage at room temperature and under refrigeration over a period of one year. In most cases only an insignificant drop in potency could be detected.

Close collaboration has been continued with the Vitamin B<sub>12</sub> Panel of the United States Pharmacopoeia. The U.S.P. micro-biological procedure has been studied and found to be precise and reproducible. A simpler modification including the six-point design has been developed on the basis of linear relationship between log-dose and log-response.

Market samples of liver extracts injectable which are now labelled in terms of Vitamin B<sub>12</sub> have been found to meet labelled claim. This is in marked contrast to the situation existing previously when these products were labelled in terms of units of activity and the Vitamin B<sub>12</sub> content was low and variable.

The effect of the addition of bone meal to enriched bread has been studied with both anemic and normal rats. At low levels of iron, bone meal appears to slow down the rate of hemoglobin regeneration in anemic rats. At higher levels it has no effect. The importance of this problem in relation to human nutrition is being studied.

A collaborative experiment is in progress with the National Research Council to study the effect of certain fats added to the diet of fat depleted and normal rats.

### **Alcohol, Cosmetic and Colour Section**

Investigation of alcoholic beverages included analyses of liqueurs, wines and beers, and studies on methods of determining some of the less-known minor constituents such as acetal and acetoin. The examination of beers confirmed the trend away from full-bodied beers to a beverage lighter in body and flavour.

Most of the relatively small number of consumer complaints regarding cosmetics which were investigated, were traced to a specific sensitivity of the user to one or more of the ingredients while a few could be attributed to misuse or ill-advised use on the part of consumers.

Examination of food colours continued and a number of confections containing non-permitted colours were refused entry at customs. A most co-operative spirit in this matter was shown by a number of United Kingdom exporters.

### **Pharmacology and Toxicology Section**

Four of the additives which have been proposed for use or are used in bread were subjected to a 52-week chronic toxicity feeding trial in rats. These additives, polyoxethylene monostearate, calcium propionate, chlorine dioxide, and a mixture of 3 antioxidants were incorporated in bread at 50 times the recommended level of use. The bread was fed to male and female rats as 75 per cent of the total diet from weaning age for 52 weeks. None of the ingredients under test exerted any significant effect on growth, mortality, or feed efficiency. The tissue studies revealed no effects of diet at 3 or 6 months. The year-end tissue examination and final evaluation of the data have not been completed.

Tentative specifications for blood expanders, (polyvinylpyrrolidone and dextran) have been drawn up. A survey of commercial products available for experimental use has been made and tests have been applied to assess the conformity of these preparations to the tentative specifications. The effect of polyvinylpyrrolidone as a drug carrier on the toxicity of morphine, on the anaesthetic action of several local anaesthetics and on the soporific effects of seconal and several antihistamines has been determined. The product showed no appreciable effect in potentiating the action of any of these drugs at the levels tested.

Conditions affecting the activity of a highly purified lactic dehydrogenase were investigated. The effects of several barbiturates, analgesics, anti-tubercular drugs and disulfiram on the activity of this enzyme were studied.

A survey was made during the year on market products of ACTH for both oxytocic and pressor contaminants. The chicken and rat blood pressure methods were used to detect these contaminants. It was found that all the lots examined contained less than one unit of pressor and one unit of oxytocic activity per 25 International Units of corticotrophin (ACTH).

A number of lindane vapourizer units were tested for emission rate. It was found that all the units with the exception of one gave off less than the declared amount of lindane per day.

A study was undertaken of Isoniazid and Iproniazid to ascertain if their use was contra-indicated when used along with a number of other drugs, and also to find out if tremors, a reported side-effect, could be controlled by additional drug therapy. A report of this investigation will be published in the American Journal of Tuberculosis.

Following the development of a suitable assay method in this laboratory, a survey of market products of purified extracts of *Veratrum* alkaloids was made. Significant differences in potency were found in different manufactured lots of this product.

The Methemoglobin concentration before and after oral administration of different doses of sodium nitrite was determined in cats, dogs, rabbits and rats. The results showed that a difference in sensitivity to sodium nitrite exists between the different species. Since the amount of nitrite permitted (200 p.p.m.) in meat causes a maximum of approximately 2% Methemoglobin in cats, the most sensitive species studied, it does not appear that it would constitute a health hazard.

Assays carried out on various mammalian hearts have shown that there were significant differences in potency among different lots of Cortunon (a non-hematopoietic liver extract). The details of these assays and the findings on the comparative coronary dilator activity of aminophylline, khellin, papaverine and Paveril have been published in the Journal of Pharmacy and Pharmacology, 5:94, 1953. Myocardone (a heart muscle extract) has been shown to have a coronary dilator and a heart stimulating action. Significant differences in potency have also been observed among different lots of this product.

Tocopherol, over fairly wide dosage range, has been found to have no coronary dilator or heart stimulating action. Glycocyamine has been found to cause a definite coronary constriction and heart stimulation. Betaine is ineffective on the heart. Simultaneous or previous injections of betaine do not potentiate the effects of glycocyamine. The two latter drugs have been proposed recently for the treatment of heart diseases.

Satisfactory results have been obtained using the tracheal chain method for the assay of broncho-dilator drugs.

Long-term chronic toxicity tests on some of the food colours are in progress.

Studies on the detection of insecticide residues on crops by means of an adult fly technique are underway.

Collaborative studies were undertaken with the U.S.P. Revision Committee on Digitoxin and d-tubocurarine chloride reference standards, hyaluronidase assay methods, and with the American Pharmaceutical Association Committee on Physiological Testing on the acute toxicity testing of drugs.

Market samples of Dimercaprol (BAL) were found to be uniformly toxic but less toxic than the proposed British Standard.

## Physiology and Hormones Section

A study was made of the factors affecting the bioassay of adrenal cortical hormones using the deposition of reducing substances in the liver as the criterion of the response. Immature adrenalectomized male rats were employed in a collaborative assay of adrenal cortical extracts by this procedure with the United States Pharmacopoeia. An investigation of the involution of the thymus gland in intact weanling rats by the administration of adrenal cortical hormones

has been initiated and a satisfactory assay for these extracts has been developed. Thymic involution has been employed for the bioassay of corticotrophin (ACTH). The method involving the measurement of adrenal ascorbic acid depletion following the intravenous injection of ACTH into adult hypophysectomized rats, does not differentiate between the purified ACTH now available and the earlier "crude" ACTH preparations. Clinically, the potency of purified ACTH appears to be approximately three times that of "crude" ACTH as measured by adrenal ascorbic acid methods. Fortunately the thymus involution procedure, using intact weanling rats, does differentiate between the two forms of ACTH and this method of assay is being investigated thoroughly.

The bioassay of growth hormone was studied employing the increment in the width of the epiphyseal cartilage of hypophysectomized immature female rats, as the criterion of the response. A preliminary investigation of an assay for thyrotrophic hormone was initiated.

Factors influencing the mouse convulsion method for the assay of insulin have received further study.

Work on the chronic toxicity of stilbestrol has been continued, and it has been ascertained that a daily dose of 7.5 micrograms will inhibit normal breeding in the male rat. The investigation of the effect of stilbestrol in hypophysectomized adult rats is still under way.

Chemical methods of assay for hormones such as: cortisone, hydrocortisone, progesterone, testosterone and stilbestrol have been carried on as a continuing project.

### Pharmaceutical Chemistry Section

A study undertaken in conjunction with the Vitamin Laboratory to determine a relationship, if any, between an *in vitro* disintegration time and *in vivo* availability of sugar coated tablets has been successfully concluded. A relationship has been established between the times obtained by using a modified U.S.P. XIV procedure and the disintegration *in vivo* as illustrated by the availability of the riboflavin from the tablets concerned.

In a project designed to obtain data on a sampling plan for the determination of weight variations of tablets several thousand tablets were procured directly from the tableting machines of a number of drug manufacturers. These were individually weighed and the results subjected to statistical analyses. The relative merits of a proposed weight deviation test and the current B.P. and U.S.P. tests are being evaluated.

A method of assay for calamine lotion was developed.

A nonaqueous method for the titration of caffeine using a visual indicator was established. Extension of this work into a rapid assay of A.P.C. tablet is being undertaken.

Collaborative work as requested by the British Pharmacopoeia Commission, the Revision Committee of the United States Pharmacopoeia, the World Health Organization and other agencies has been conducted at various times throughout the year.

### Organic Chemistry Section

Advanced methods of instrumental analysis, the x-ray diffraction method, infra-red and ultraviolet spectrophotometric methods have been extensively studied for the application to identification of narcotics and barbiturates. The projects have been carried out in collaboration with the X-ray Diffraction Laboratory, National Research Council, Ottawa, and the Infra-Red Laboratory, Defence Research Laboratories, Ottawa. A series of one hundred basic

narcotics were purified and extensively characterized by the usual physical constants and used as standards from which the x-ray, infra-red and ultraviolet data have been obtained. Arrangements have been made with United Nations, Narcotics Division, to publish the data in a special form.

This section has applied instrumentation methods to help solve a number of cases involving the use of drugs for abortion, suicide and murder for the Royal Canadian Mounted Police Crime Detection Laboratory. The x-ray and infra-red methods were successfully applied to identify the drugs in a number of these forensic cases.

A new species of morphine bearing poppy, *Papaver setigerum* has been grown and studied with the help of the Dominion Experimental Farm. It was definitely found for the first time that morphine occurs in a poppy other than *Papaver somniferum*. This discovery has been published by the United Nations Bulletin on Narcotics.

The opium origin project has been continued. A paper entitled "Relation between 'Porphyrone-mecnidine' Lovibond red values and ultraviolet absorbance data" has been published by the Economic and Social Council of the United Nations in continuation of the Canadian research program.

A new method for the determination of structure and composition of cadmium halide complexes with narcotics has been found.

Methods for identifying the commonly occurring barbiturates have been developed. The new methods involve colour and crystal reactions with the barbiturates.

### **Biometrics Section**

The work of this section has broadened considerably and in addition to preparing the necessary designs of experiment and relevant computations for the other sections of the Divisions, joint projects have been undertaken with other Departments.

Procedures for adequate sampling and the collection of useful data have been devised for several types of products including bulk commodities. An extensive study of the problem of weight variation in compressed tablets has been undertaken. This is proceeding satisfactorily and involves a great amount of time and labour since theoretical and practical considerations must be combined by purely experimental methods.

### **Animal Pathology Section**

Histopathological studies on the tissues of over 700 animals treated with various chemical additives used in foods were made and in addition assistance was given to the Occupational Health Division in the post-mortem and histopathological examination of tissues of animals treated with insecticides. Vaccines were prepared and used in animals suffering from chronic respiratory diseases.

Over 20,000 rats and 3,000 mice were raised during the year and utilized by the Pharmacology and Toxicology Section and the Physiology and Hormones Section in experimental work. Thirty tons of feed were used during the year to feed the animal colony.

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## HEALTH INSURANCE STUDIES

### National Health Program

The further development of the National Health Program during the fiscal year under review should be considered as one of the outstanding features in the development of health services in Canada.

Over \$27,000,000 has been paid to the provinces for the development of their health services and for the construction of hospitals and related facilities.

The year 1952-53 was the fifth year of the operation of the program inaugurated by a statement of the then Prime Minister on May 14th, 1948. The program, as announced in 1948, consisted basically of three aspects: survey of health facilities and services; expansion and improvement in the field of health, and assistance towards the construction of hospitals.

#### Surveys

The first aspect of the plan, namely, the surveying of health facilities and services, has been practically completed during the year under review. All provinces, with the exception of one, submitted survey reports which included a description of their services, an inventory of their existing facilities and, above all, recommendations and suggestions as to the further development of health services in Canada.

Data contained in the Health Survey Reports are being compiled and tabulated by the Research Division and it can be expected that within the next few months a comprehensive picture of the situation throughout the country will be available. The compilation would give for the first time in Canada an over-all picture of the existing situation as well as an indication of further development and expansion of health services.

The information obtained by the Health Survey is being supplemented by data obtained from the "Canada Sickness Survey". After the "Sickness Survey" was completed in the field, the Dominion Bureau of Statistics, in cooperation with this department, has undertaken to compile the information which will give, in the near future, a comprehensive picture of the over-all amount of illness in Canada and the amount of money spent on health care.

These two surveys, jointly, form the basic groundwork whereby every Canadian citizen may receive adequate health care.

#### Assistance Towards the Development of Health Services

It has been realized since the commencement of the program that the basic short-coming was the shortage of adequately trained personnel. During the year under review, as in the preceding years, very substantial amounts of money have been voted towards the training of personnel which, as in the years gone by, took the form of direct financial assistance to trainees, assistance towards the establishment and maintenance of training facilities, or to both of these forms jointly. Training facilities have been established in three specific fields where the shortage of personnel was particularly acute; namely in the training of mental health personnel, in the training of laboratory staffs, and in the training of nurses and their aides.

Training of mental health personnel, i.e., psychiatrists, clinical psychologists, psychiatric social workers, and psychiatric nurses, has been developed at Laval University, the Universities of Toronto, Montreal, McGill, Dalhousie, Queen's, and British Columbia.

Facilities for the training of laboratory personnel have been augmented by the establishment of a school for laboratory technicians affiliated with Laval University and at Regina College (Saskatchewan). A special course for the training of academically qualified bacteriologists is being assisted at the University of British Columbia.

Assistance towards the training of nurses primarily took the form of supporting experimental schemes which had as their aim the improvement of the quality of training as well as the shortening of the training period. The nursing school at the Metropolitan Hospital in Windsor and the special school affiliated with the Toronto Western Hospital could serve as examples in question. Several schemes for the training of nursing aides have received very substantial assistance. As has been mentioned, apart from training facilities assistance has been provided towards the training of a number of individuals. Over 5,000 health workers received or are receiving training with the assistance of the Grants Program. They include specialists in public health, psychiatry, diseases of the chest, cancer, radiology, pathology and in many other specialties. The training of nurses covers the fields of public health, child and maternal care, special hospital techniques, teaching and supervision.

A great number of other health workers including hospital administrators and record librarians have strengthened the staffs of health agencies and hospitals.

### Specific Health Services

Generalized health services established or strengthened with the assistance of the National Health Program now reach about 60 per cent of the Canadian population. Nineteen health units have been established since 1948 and 51 more have been strengthened and extended, as have 47 city health departments. Provisions for treatment of arthritis and rheumatism have been made in all Canadian provinces.

As in the previous four years, during the year 1952-53 central provincial health services, as well as local services and their agents working in the health field, have been strengthened by additional services and additional staffs.

In the mental health field, while generous assistance has been provided under the Mental Health Grant to improve treatment facilities, emphasis was placed, however, on prevention. Seventy-seven mental health clinics were in operation by the end of the year 1952-53 while only 17 existed prior to 1948.

The dramatic decline in the mortality figures due to tuberculosis coincide with the establishment of the National Health Program. Many lives were saved by the provision of modern scientific equipment and the free distribution in sanatoria of life-saving drugs like Streptomycin, P.A.S., and Isonicotinic Acid Hydrazide. Again here, as in the field of mental health, emphasis is placed on prevention. Community health services have been strengthened and a program for x-ray hospital admissions has been established under the National Health Program. Over two million people are x-rayed every year. It is needless to say that the improvement of general health services, improvement in sanitation, school health services, etc., act as the most efficient method of preventing the spread of tuberculosis.

The development and expansion of cancer diagnostic and treatment services in several of the provinces should be considered an important achievement in this field. In addition, grants from the fund, either directly or through the National Cancer Institute, are spent on research into the causes and cure for cancer.

Cancer is not the only field in which research activities are being supported by the National Health Program. Over four hundred research projects covering the whole field of health are being supported. It should be emphasized that in the field of mental disease, for instance, there was no financial assistance provided prior to 1948 while now a great number of extremely important projects are carried out at various centres throughout the country.

### **Assistance to Hospitals**

As in the previous years, the development of hospital construction exceeded expectations. During the five-year period 46,000 hospital beds have been constructed with the assistance of the Hospital Construction Grant. In addition, the Grant has provided about 5,000 bassinets for newborn babies, about 5,000 beds in nurses' residences and over 1,200,000 square feet of floor area to house community health centres and combined laboratories. It should be emphasized that under the heading "Community Health Centres" assistance is given for the accommodation of public health services as well as the construction of out-patient departments and areas devoted to the provision of diagnostic and treatment facilities available to in-patients and out-patients. The term "Community Health Centre" has been selected with the purpose of making the hospital, as such, the health centre of the community, bringing the various facets of health services under one roof. It has, as well, the purposes of removing the unjustified stigma from out-patient departments.

Assistance towards the cost of construction is not the only form of assistance that hospitals have been receiving from the National Health Program. As has been mentioned, practically all our larger hospitals have been provided with x-ray machines for the x-ray of hospital admissions, thus reducing the possibility of infection of other patients and nurses. Several hospitals received specialized equipment such as incubators for the care of new-born babies, equipment for cancer clinics, etc., but, most important was the assistance given in the training of personnel. Large numbers of qualified workers who received training with the assistance of the National Health Program are on the staffs of various hospitals. Provision of additional staff ranks in importance probably as high as assistance towards construction.

### **Summary**

It would seem proper to mention in reporting on the fifth year of the operation of the National Health Program that close co-operation between provincial and local health authorities, voluntary health agencies and the Federal Department has created unprecedented development in health services throughout the country. The establishment of the National Health Program not only provided additional financial assistance but stimulated the efforts of the other agencies in the health field. Further expansion of the National Health Program, consisting of the Laboratory and Radiological Services Grant, the Medical Rehabilitation Grant, and the Child and Maternal Health Grant, can serve as an indication of the proper direction the National Health Program is taking.

### **Studies on Health Insurance**

The term "Health Insurance" is very often taken as assistance for sharing or pooling the cost of illness. This narrow approach should rather be termed "sickness insurance", while health insurance, besides helping to remove the financial barriers to the best care available, should ensure that facilities are provided so that all people have adequate health maintenance services. This view was taken at the commencement of the National Health Program. As has

been mentioned, this program has as one of its important purposes the creation of a sound foundation for health insurance. The application of the Health Program during the past five years and the administration of grants to the provinces for their various facilities and services should be considered as the fundamental approach to gradual implementation of a program to assure positive good health. The Health Survey Reports and the results of the Sickness Survey are providing scientifically sound information for further development.

A number of specific studies related to sociological and economic aspects of health care have also been undertaken. Two worthy of mention were made possible by the Rockefeller Foundation which provided travel grants to Officers of the Directorate to investigate the provision of health care in the United States. Reports of these studies are on file in the Department.

The Research Division acts as a research arm of the Health Insurance Studies Directorate in investigations related to prepaid hospital and medical care programs. This includes the preparation of memoranda on costs estimates for various types of health insurance programs, data on health expenditures and information concerning services provided in various health care programs. During the year the Research Division published a comprehensive bulletin on "National Health Insurance in Great Britain 1911-1948", brought together documentation on the health insurance program in France and continued its exploration of voluntary medical and hospital prepaid plans in Canada with a view to the publication of a bulletin in this field. Various public hospital and medical care plans including those in British Columbia, Alberta, Saskatchewan, Manitoba and Newfoundland were studied and a bulletin covering these programs is in the course of preparation. Further, an analysis of the programs of personal health services for public assistance recipients which are in operation in five provinces was undertaken.

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## INDIAN HEALTH SERVICES

### Function

The health service for Indians and Eskimos has evolved to augment the care normally provided by the home, the community and provincial agencies. Because of its role, this Service has expanded in response to demonstrated need and as newer methods in both active treatment and public health care have indicated that prompt action would preserve life and yield obvious economic returns. It stands ready to hand back the charge to the home, the community and the province when these agencies exhibit the will and the resources to take over.

The census of 1949 showed that there were 136,500 Indians and about 9,300 Eskimos. Although there has been enfranchisement of 500 to 1,000 Indians each year, the actual rate of increase of these people is such that the combined population in 1952 may be projected at 155,000. Their birth rates are high—between 25 to 50 per thousand. The death rates are high too, but the net gain parallels a normal population increase of about  $1\frac{1}{2}$  per cent per year. The groups are too small and too widely varied in culture and environment to provide meaningful statistics.

### Facilities

The field unit in Indian Health Services is a health centre under the charge of a graduate nurse who conducts out-patient, pre-natal, well-baby and health educational clinics. From this centre the nurse extends her influence into the homes, schools and community life, driving home the fundamentals of good health habits and ensuring that protective procedures are applied.

Some of the health centres have beds and sufficient auxiliary staff to care for maternity cases and disabilities which do not require extensive hospital facilities. There were 33 of these nursing stations, with a total of 172 beds, in operation during 1952. Some of the health units consist of a medical officer only or a combination of medical officers and graduate nurses. There were 23 of these units. There were 32 dispensaries with a graduate nurse only for a total of 88 health units in operation during the year.

Supporting the departmental health centres is a chain of 18 departmental hospitals with 2,189 treatment beds. The larger of these are in the main Sanatoria for the treatment of tuberculosis, but even these, and all of the smaller hospitals, are equipped to serve as community general hospitals for all Indians in the vicinity.

The departmental hospitals are almost exclusively in the West. The most easterly is that at Moose Factory, Ontario, near James Bay. In the East entirely and everywhere that community hospitals or provincial sanatoria have been able to give the necessary care, these facilities are used. In the Northwest Territories and in the James Bay area the Mission Hospitals are very closely associated with Indian Health Services as almost all of the patients are native for whom a patient day rate is paid, but as well, the medical officer, expendable supplies and ward stationery are provided by the department.

Staffing the field units were 26 medical officers and 103 graduate nurses of which staff two medical officer and nine nurse positions were acquired during 1952. In addition, there were nine dental surgeons visiting the Indian Residential and Day Schools to provide instruction in dental health, preventive and curative attention to the school-age groups. Where time permitted, palliative and essential prosthetic treatment was provided to needy adults.

The professional staff of departmental hospitals consisted of 34 medical officers and 217 graduate nurses. The additions during the year were two medical officer and 36 graduate nurse positions. Not all positions were occupied, due to the continuing shortage of qualified doctors and nurses.

Supporting the medical officers and nurses were 1,150 valued employees whose skills and efforts make a medical service possible. Of these 295 were Indians or Eskimos. The additions during the year included 138 positions of appropriate classifications.

### Preventive Procedures

Health education was continually stressed by all of the professional staff because in increased health consciousness of the individual lies the greatest hope of improved health standards of any, and especially of native, peoples. Material for this important work was provided in the form of department pamphlets and posters. Extensive use was made of the T.B. film strip "The Starlight Story" and all but the final stages were completed on two new strips "Safe Water" and "Infant Feeding." Some of the information material is developed around posters prepared by Indian children as a result of the health educational work being carried on in their schools.

Routine immunizations were pressed towards the goal of 100 per cent protection against the communicable diseases of childhood. This is a herculean task among the nomadic and semi-nomadic groups. Indian Health Services is satisfied that the use of the Bacillus-Calumette-Guerin vaccine is fully warranted and 4,600 inoculations were made during the year by departmental officers. Many community hospitals give the inoculations to all Indian babies born therein.

### Case Finding

During the spring and summer of 1952, extensive surveys were conducted seeking an x-ray view of the chest of every Indian and Eskimo who could be reached. In addition to the continuous routine admission examinations carried on by departmental and an increasing number of non-departmental hospitals, 10 survey teams covered the more isolated groups. In all 60,704 chest x-rays were taken during the year.

The professional staff and survey teams were on the alert for any remediable disorder and provided appropriate treatment as well as inoculations in the settlements, or arranged evacuation to centres where more adequate attention could be provided. An example of a survey and treatment team is the medical party which accompanied the Eastern Arctic patrol vessel "C. D. Howe". This consisted of two medical officers, a dental surgeon and assistant and an x-ray operator. This team treated 77 patients, made some 200 dental examinations and treatment and took 1,007 chest x-rays, of which 113 proved to be pathological.

## Active Treatment

The 18 departmental hospitals admitted 7,600 patients and provided 707,903 patient days treatment. Non-departmental facilities accepted 23,843 patients and provided 730,142 patient days treatment. The break-down is given in some detail as appendices. These statistics indicate that there is not a significant difference medically between Indians and Eskimos and the other racial groups in this country. In addition to services provided by departmental personnel and facilities, many hundreds of local physicians, dentists, nurses and lay persons have provided care to the Indians and Eskimos. Some of these were in part-time positions, most were on a fee-for-services basis, but there was a host of individuals of many vocations who gave time, skill and sympathetic attention gratuitously. These included government officers, such as those of Indian Affairs and the R.C.M. Police, missionaries, traders and others imbued with good will and community spirit. These people remain the heart of any health service.

## Tuberculosis

While this communicable disease persists as the scourge of native peoples, marked advances have been made in its control among the Indians of Canada over the past few years and 1952 contributed new evidence of progress. Although the latest complete figures indicated a death rate of 262 per 100,000 (1951), 11 times that for the population as a whole, it is in marked contrast to a rate of 579 in 1946. As an example of a straw indicating the wind, in October 1952, for the first time since records have been kept, there was not a death from tuberculosis among the 28,000 Indians in British Columbia.

Unfortunately the picture was not as bright for the Eskimos. The results of surveys in 1952 indicate that tuberculosis is on the increase in certain areas. Their environment makes these people most prone to chest disease.

## Extension of Services

The only increase in facilities providing additional treatment beds was the completion of a hospital of 35 beds at Norway House, Man., replacing the former dilapidated building which accommodated 22 only. However, there were extensive improvements in physical plants at several institutions and additional accommodation for staff was acquired at Aklavik in the N.W.T. and at Moose Factory in Ontario.

## Cooperation with Other Agencies

It is implicit to its role that Indian Health Services should embrace every opportunity to integrate its activities with those of the communities adjacent to the Indian and Eskimo groups. The extensive use of local professional and treatment services has been mentioned. Wherever possible, provincial agencies have been encouraged to take charge or take part in case-finding and other public health endeavours. Everywhere provincial institutions have been used to the fullest practicable extent.

Obviously Indian Health Services is strategically placed in the department of National Health and Welfare and has made ample use of the advisory and laboratory services of this department. A close liaison has been maintained,

both centrally and in the field, with the administrators of Indian Affairs in the Department of Citizenship and Immigration and the administrators of Eskimo affairs in the Department of Resources and Development.

In addition, a fine working relationship has existed with the other government agencies operating in the areas inhabited by Indians and Eskimos and with religious and commercial interests serving these people, to the mutual benefit of all.

Indian and Eskimo health statistics will be found in Tables 7, 8, 9 and 10, pages 115 and 116.

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## ENVIRONMENTAL HEALTH AND SPECIAL PROJECTS

### Occupational Health Division

In December 1952 the name of this Division was changed from Industrial Health to Occupational Health to indicate the expansion of the scope of service rendered, which now encompasses all gainfully-employed groups. Clinical, technical, laboratory, and informational services are provided to provincial health departments, industrial establishments, federal government departments, certain crown companies, and to other interested groups.

#### Clinical Services

During the year the medical staff, in its consultative capacity was able to be of assistance to a number of provincial health departments in providing information regarding industrial hazards and in regard to particular problems affecting the health of the workers. Assistance to the Department of Trade and Commerce took the form of information and material for transmission to one of their overseas branches. The National Defence Department was assisted in regard to a particular problem on heat, light, and noise, in a new building. An investigation into the problem of poisonous substances used in orchard spraying by the fruit growers of the Okanagan Valley in British Columbia was initiated and is continuing under provincial guidance with close liaison with the Division. Collaboration with the Department of Agriculture was maintained through the Pesticide Committee and with the U.S. toxicologists by visiting to exchange information. Assistance was also provided to the Post Office Department in the investigation of a special problem relating to the health of its workers. The investigation of air pollution by arsenic from mining operations in the Yellowknife area was continued. Useful service was rendered in other fields by personal interview and by surveys and by correspondence.

Industrial nursing activities included educational programs and visits to industries for discussion of problems and dissemination of information. Group meetings were organized in certain provinces, which proved very successful and revealed increasing organization of industrial nurses.

Papers were prepared and published and addresses given on scientific and technical subjects by various members of the laboratory and clinical staff.

#### Laboratory Services

The Toxicology Section has conducted research into the newer insecticides, particularly chlorinated hydrocarbons, which has proved valuable. It has been found that abnormalities in the growth rate of rats, disturbance in the sexual cycle, blood enzyme levels and oxygen consumption can result from relatively low absorption of these compounds. This research gives information on protection of agricultural and horticultural workers. The field and chemistry sections have continued their investigations into the arsenic pollution of air in the Yellowknife area, collaborating with the clinical studies. As a result of recommendations, collection devices have been installed for this poisonous effluent. Laboratory analysis of urine and other materials collected in the area reveal a gradual disappearance of arsenic since installation of control. The above sections also continued investigation and study of parathion exposure in Quebec apple growers and advised on protective measures. Permission to publish a report of this investigation was requested by the American Medical Association.

The Physics Section, using x-ray diffraction and the electron microscope, has established relationship between certain dusts and fatal lung disease, findings only possible by the use of this special apparatus. Detailed investigation, involving the use of the above apparatus, into air pollution in Windsor and in Ottawa has been initiated. Various sections of the Laboratory are represented on the Pesticides committee.

### Health Radiation

The Health Radiation Section, established in January 1950, visited radioactive isotope laboratories in all provinces to grant and renew health approvals in the handling of radioactive isotopes. The film monitoring service, started in 1951, has been improved and extended to over 600 films each week, servicing some 65 groups throughout Canada. A special x-ray laboratory has been completed to conduct research into methods of detection and measurement of low-energy radiation from medical x-ray units. Surveys have been carried out for the purpose of estimating scatter radiation in hospitals and industrial establishments, and information regarding procedure and on the disposal of waste was supplied to many groups.

### National Health Pesticide Committee

This Committee acts as technical advisor to the Department of Agriculture in the assessment of potential health hazards in new pesticides. Upwards of 50 new insecticides have been evaluated during the year and both field and laboratory research in connection with the work has been carried out. The Committee includes technical experts from the Occupational Health Division and the Food and Drug Divisions, and has advisors from the Animal Pathology, Chemistry, and Entomology divisions of the Department of Agriculture.

### Publications

The Division publishes a monthly *Occupational Health Bulletin* with a circulation of over 40,000 copies, and a semi-annual *Occupational Health Review* calling for 12,000 copies. The *Review* is a technical publication intended for professional and other personnel concerned with the protection of the health of workers. In addition it has been found necessary to publish a *Pesticide Bulletin* for use by medical and scientific personnel associated with the use of pesticides. Pamphlets have been prepared, among which that on Artificial Respiration has called for several reprints.

### Grants

Through Federal Public Health Grants, a total of \$39,476 was expended by certain provinces for various industrial health purposes. Of this amount, Nova Scotia used \$4,690 to provide salary and necessary equipment for an industrial hygiene engineer; the Quebec Industrial Hygiene Division used \$26,000 for further expansion and reorganization of the Division; and in Ontario, \$8,786 was expended for research on plumbism, air pollution, the physiologic effects of aluminium, biology and the problem of industrial noise.

## Public Health Engineering

The World Health Organization has defined environmental sanitation as "the control of all those factors in man's physical environment which exercise or may exercise a deleterious effect upon his physical development, health and survival". Individual factors have different relative importance according to a

country's cultural viewpoint. Canada is recognized as having a high standard of living. Much of the work of this Division is directed towards improving conditions which are part and parcel of environmental sanitation as a whole.

The functions which first prompted the formation of the Division, and which are still important, are those relative to environmental health of the travelling public and operating personnel of vessels and railways. Much work still remains to be done by all concerned and interested in producing sanitary environment on vessels. Not only should adequate facilities be provided by building them into a ship during construction or major repair, but of even greater significance, is ensuring their proper usage. To these modes of travel has been added aircraft.

Activities also include the health of those visiting national parks and other federal property, as well as the staff employed in their operation. The enforcement of international requirements governing the handling and shipping of shellfish is a further responsibility of the Department.

The legislation under which these activities are carried out is contained in several acts and regulations. Other phases of the division's responsibilities are carried out on the basis of standards which have been generally accepted by the interests involved, notably requirements for the taking and processing of shellfish, and requirements for railway bunkhouses and mobile work camps.

Specific divisional operations include the surveillance of water supplies on federal property, ice supplies used by railways for chilling food and drink, the treatment and disposal of sewage, and garbage and other wastes on federal and railway property. The Division is also concerned with sanitation on the right-of-ways of interprovincial and international railways, including passenger stations, restaurants, bunkhouses and work camps. Other activities include consideration of working conditions in federal offices, including problems of lighting, ventilation, and space, and pollution of boundary waters between Canada and the United States.

In order that satisfactory solutions of the problems can be obtained, it is necessary that sanitary surveys, examination of supply sources, treatment processes and control measures be made and the findings evaluated. When requested, designs of sewage disposal plants and water treatment plants are prepared, including the necessary plans, and, in some instances, construction is supervised.

The steady development in the Yukon and Northwest Territories has given rise to many problems in sanitation, which have been referred to this Division. The rapid growth of new townsites and the enlargement of established communities. In this connection the increase and improvement in water supply and treatment and the disposal and treatment of sewage and trade wastes have all received attention by division engineers. Assistance has been rendered in investigations relating to the causative sources of paratyphoid and typhoid outbreaks.

Active co-operation not only continues but has increased with authorities and officials of the provincial health departments, and the United States Public Health Service, through the committees and boards concerned. Consultations have been held and advice given to other Federal departments such as Fisheries, National Defence, Public Works, Transport, Veterans Affairs, Citizenship and Immigration (Indian Health Services), Agriculture and such Crown organizations as Central Mortgage and Housing, Canadian Arsenal and Defence Construction Limited. There has been a notable increase in the work relative to the installation and operation of sewerage and water systems; sewage and water treatment; general sanitation, involving Indian schools and hospitals, military camps, and construction camps of private contractors engaged in construction work on Federal property.

The tripartite agreement, to certify approved shellfish producers, between this Department, the Department of Fisheries, and the United States Public Health Service continues to form the basis of shellfish control work in the Maritimes. Requirements governing the taking, handling, shucking and packing of shellfish are used as a guide in assessing compliance with acceptable standards. Certificates for the export of shellfish are issued when compliance with these requirements is obtained. Through joint sanitary surveys and co-operative supervision of processing plants, the shellfish control program of British Columbia has been endorsed and approved producers are certified for export purposes.

Through membership on various Advisory Boards of the International Joint Commission this Division is actively associated with water and air pollution problems and their control. Investigation of conditions existing in Rainy Lake, resulting from mining operations at Atikokan, were continued. Revised disposal methods for dredged material have improved conditions in these boundary waters. Also in co-operation with the United States Public Health Service, an investigation was carried out in the New Brunswick-Maine international portion of the St. John River. Through the two members of the division on the Board of Technical Advisors on Boundary Water Pollution Control, the Department has been kept informed of the progress and future planning for pollution control of international waters in the Windsor-Detroit and the Niagara River areas. A study of air pollution in the Windsor-Detroit area is continuing. Active participation has been continued in the program of the Pollution Control Council for the Pacific Northwest Basin.

Other activities included participation in the revision of the National Building Code, through its representation on the technical committees appointed to study the various phases of this Code. Special mention is made of time spent in conferences and the contribution rendered in the preparation of the Plumbing Code section. The work in this respect is closely related to activities associated with the Advisory Committee on Public Health Engineering to which time and effort has been given in the promotion of more uniform practices and standardization of equipment in the field of environmental sanitation.

In all, 1,586 sanitary surveys of water supplies, ice supplies (natural and artificial) and shellfish growing areas were conducted. Over 8,000 water samples were taken for bacterial and chemical analysis. Some 1,292 examinations of railway property, including stations, restaurants, bunkhouses, mobile work camps, and coachyards were made and 135 examinations of sewage treatment plants to check the efficiency and control of operating procedures were performed.

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## MEDICAL ADVISORY SERVICES

### Blindness Control Division

The Blindness Control Division continued to encourage the preservation of vision through the medium of pamphlets, films and material for radio programs produced by the Information Services Division. Funds were provided to produce a French version of the Glaucoma film, "Hold Back the Night."

Attention was focussed on the four glaucoma clinics financed by Health Grants—one at Toronto, two in Montreal and one in Quebec. Glaucoma is Canada's greatest eye problem because it causes more blindness than any other eye disease. Furthermore its incidence is increasing, due in part to the strain of modern civilization. It is common after age forty and occurs in several forms, acute and chronic. The chronic type is particularly dangerous as it is usually insidious in onset without early symptoms and may progress for years before failing vision is noticeable. In its early stages, when treatment is most effective, it can only be diagnosed by a medical eye specialist. With treatment, vision can be preserved and blindness delayed indefinitely or for many years but lost vision cannot be regained. It is believed that the control of glaucoma could be aided by the establishment of more glaucoma clinics in association with medical schools across Canada.

Under Health Grants, research is being conducted in Toronto at the Banting Institute into glaucoma and virus eye diseases. Similarly, at the Hospital for Sick Children, the causes of cross-eyes in children and treatment are being investigated. Successful treatment should commence as soon as possible after the cross-eyes are noticed—usually between the ages of two and four years. Operation is required in about 20 per cent of cases.

The study of hereditary optic atrophy in a large family connection in the Ottawa area is continuing, in co-operation with the Nutrition Division.

#### Treatment Plan

The treatment plan for recipients of Blindness Allowances sponsored by the federal government in co-operation with some provinces is achieving success, especially in removing cataracts. Sixty per cent of patients operated upon have received useful vision. However, too few applications for treatment are being received.

Further efforts have been made to inform the public that half of all blindness is preventable and that about 12 per cent of those now blind (mostly cataract cases) could have sight restored by treatment.

#### Blindness Allowances

The bulk of the Division's work concerns the arranging of eye examinations for blindness allowance purposes and the issuing of blindness certificates based on oculists' reports to the provincial authorities, enabling allowances to be paid. Since January 1, 1952, a number of Indians and Eskimos have received blindness allowances under the Blind Persons' Act.

The number of blind persons registered in Canada by the Canadian National Institute for the Blind at the end of 1952 was just over 20,000. Of these, 8,299 are receiving blindness allowances. In addition, some 3,000 blind persons formerly receiving blindness allowances have been transferred to Old Age Security pensions, having reached the age of 70 years.

## Civil Aviation Medicine

The Division of Civil Aviation Medicine has continued to serve as medical adviser to the Department of Transport (Air Services) on physical standards for aviation personnel and also to act in an advisory capacity to the Department of Transport, other government departments, interested organizations and the public generally, on the health, safety and comfort of aircrew, groundcrew and passengers by air.

Some 12,000 medical examination reports and 1,600 electro-cardiograms were assessed by the Division for pilots and other aviation personnel.

During the year, consideration has been given to re-organizing the procedures for the assessment of all medical examination reports. Decentralization, with assessment by a part-time physician at the district level, was initiated in Toronto on a trial basis on the first of February, and if satisfactory, will be introduced in all districts. A reorganization of the Regional Medical Consultant Boards was also initiated as part of the over-all decentralization plan.

During the year, investigation was continued in the following subjects associated with aviation medicine: psychological studies aimed at improving Commercial and Transport pilot selection; degree of hearing loss as evidenced by personnel licensed by the Department of Transport to fly commercially; high altitude aerial photography in unpressurized aircraft; crash injury reporting; colour perception requirements for Commercial and Private Pilots; hours of duty for Commercial Pilots and Air Traffic Controllers.

Liaison with the R.C.A.F. and the Air Cadet League of Canada was maintained. In connection with the R.C.A.F. "Exercise Chipmunk" program, approximately 600 medical examination reports were assessed according to Department of Transport and R.C.A.F. standards. Similarly, some 500 medical examination reports relating to the Scholarship Flying Training Program sponsored by the R.C.A.F. and the Air Cadet League of Canada were assessed according to R.C.A.F. and Department of Transport standards.

The R.C.A.F. Institute of Aviation Medicine and the Defence Research Medical Laboratories have continued to assist the Division in the instruction of civilian pilots on high altitude flying, in the investigation of borderline clinical cases, and generally on problems associated with aviation medicine.

## Civil Service Health

With the close of the fiscal year ending 31st March, 1953, the Civil Service Health Division completed its sixth year of activity. It has continued to discharge its primary obligations in providing a comprehensive preventive health program for the conservation and promotion of the health of federal government employees.

The Health Centre in Ottawa, with minor changes in personnel, has rendered an advisory, diagnostic, and emergency medical service to some 32,000 government employees. It has also administered a nursing-counsellor service through its seventeen established Health Units to over 22,000 civil servants in government buildings in Ottawa. Health services for employees of the National Research Council, in the Montreal Road Laboratories area, have been expanded and moved to more suitable quarters, greatly facilitating the administration of our nursing-counsellor service to this rapidly growing employee group. Similarly, with the completion of the new Dominion Bureau of Statistics building at Tunney's Park, health services were transferred to ideal accommodation with facilities available to meet the projected needs of

the steadily increasing government employee population planned for this area. Certain isolated groups of employees, too small in number to warrant a full-time nursing counsellor, are now receiving a part-time visiting nursing counsellor service.

In another field, namely that of controlling food services in government buildings, this division has played a major role in association with the Divisions of Nutrition, Public Health Engineering, and the Laboratory of Hygiene. Until this past year the department had no clearly defined authority to exercise adequate control over the establishment, location, and operation of these food dispensing establishments. Two Orders-in-Council, passed in August, 1952, now give to the Department of National Health and Welfare clearly defined responsibility in the supervision and control of these establishments. Under this authority a Canteen Committee composed of representatives of the divisions named above has been most active in carrying out inspections and making recommendations for improving food services in government buildings. This division has given over-all direction to this program and has co-ordinated the activities of the divisions concerned.

One of the basic policies adopted at the outset has been to encourage government departments to have employees report to the health unit following an absence on account of illness. Early in the fiscal year the division completed a three-months' survey of such health unit return-to-work visits among a representative cross section of the health units in Ottawa. More than 10,000 return-to-work visits due to casual and certified illness were carefully analyzed. The results of this survey conclusively demonstrated the value of such return-to-work visits in controlling absenteeism, supervising the health of employees, protecting the health of their fellow workers, as a medium of health education and instruction, and finally as a means of interpreting the service program to the employee population.

The division throughout the year has continued to work in close harmony and with other departments of government and with other divisions of this department. Outside Ottawa, the division has called freely upon the facilities of the Department of Veterans Affairs, and within this Department on the Division of Quarantine, Immigration Medical and Sick Mariners Services for medical examinations and consultations. Also, the Occupational Health Division and the Public Health Engineering Division have assisted in the investigation and improvement of working conditions, and the Nutrition Division in the investigation of nutritional problems.

Senior officers have made significant contributions to several extra-divisional activities. The Chief Supervision of Nursing Counsellors, in addition to her duties within the division, has continued to serve in her capacity as the department's consultant in nursing. The Chief of the Division has served as a member of the Board of Trustees of the Group Hospital-Medical Insurance Plan of the Public Service of Canada, and the Assistant Chief has served as a member of the Planning and Advisory Committee for Civil Service Civil Defence.

The Certificate Review Section has continued to collect statistical data on sickness absenteeism in the Civil Service. The data is coded and analyzed by personnel of the Public Health Section of the Bureau of Statistics. This material forms the basis of an Annual Statistical Report on "Illness In The Civil Service", which is a detailed analysis of the certified illnesses in the government service.

Over the past six years sickness absenteeism has been given careful study. Impressions formed in the early years have been further strengthened and substantiated in the light of growing experience. It is believed that the reported number of man-days lost, both from casual and certified illness, is in excess of that occasioned by actual illness. Under the present system of

administration and recording it is impossible to state how much sick leave not properly chargeable to illness is granted in various departments. The impression is that it must be substantial. This is particularly true with respect to casual leave. It is increasingly apparent that government departments must make important changes both in their attitude to the problem and in their system of record keeping if this gap is to be narrowed and if any tangible reduction in absenteeism chargeable to sickness is to be achieved.

In the first place, employees must be taught to conserve and not to squander their sick leave. More intelligent interpretation and administration of sick leave regulations is essential. Too often a junior clerk is assigned both the duty of record keeping and sick leave administration. Certainly, in this Division's opinion, the administration of these important regulations should be the responsibility of a senior personnel officer. Departments must assume greater responsibility for the over-all control of sick leave and not rely on the Civil Service Commission, or in many cases upon the advice of this division, to make their administrative decisions. These factors, together with some modification of existing sick leave regulations, designed to eliminate major abuses, will do much to reduce unnecessary absenteeism presently attributed to sickness. Secondly, departments should adopt a more uniform system of records, make available age and sex distribution of their employees, in order that morbidity rates can be calculated. Only by this method will it be possible to determine where, in what age groups, in which sex, and in what employee groups or particular occupation, deviations from reasonable norms are occurring. Then, and only then, can appropriate measures be taken to bring about material reduction in absence morbidity.

Table 1 with accompanying chart, and Tables 2 and 3, pages 109 to 111, present a fairly accurate picture of the services rendered during the fiscal year. Table 1 summarizes by months the visits made to the seventeen Health units operating in Ottawa, by sex, nature and classification of visit, and disposal. A total of 177,413 visits, an increase of 8,500 over the previous year, have been recorded. Of this total, 75 per cent were first visits resulting from new disabilities, the remainder being repeat visits for a condition previously reported. The broad distribution of visits by month and by cause is depicted in Chart I. The seasonal variations in work load at the Health Units, and in particular the seasonal fluctuation between respiratory and digestive diseases, is clearly shown and is similar to that experienced in previous years. Once again an extremely low percentage of employees, 2.5 per cent, were sent home following a first visit to the Health Unit.

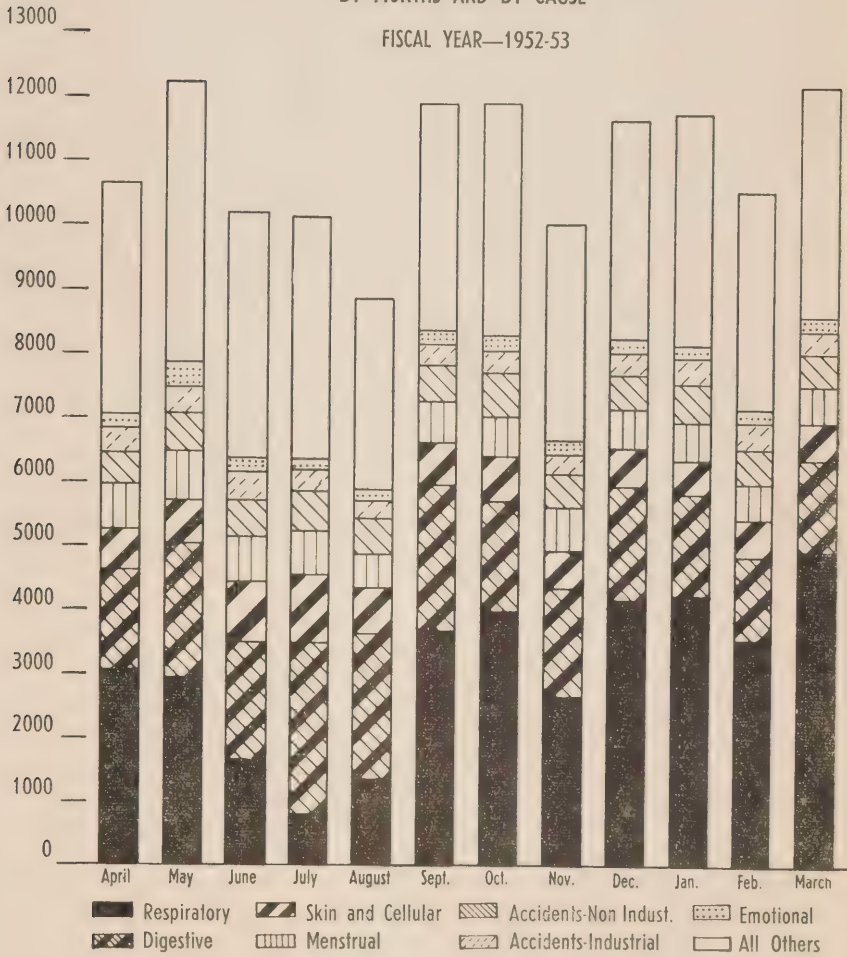
The above table and chart do not tell the whole story. In almost one quarter of the visits made to the Health Unit socio-economic factors or welfare factors have been found primarily responsible for the visit or at least to play a major contributory role. The factors most frequently occurring are those relating to personal health and hygiene, nutrition and budgeting, family health problems, emotional disorders, and factors associated with the severely physically handicapped. It is in the handling of these problems that really skillful counselling is important.

An analysis of employee visits to our Health Units provides a most interesting barometer of the pressures of office, home, community, and world events. The high cost of living, high employment, and acute housing shortage were factors of major significance. High employment means a shortage of adequate personnel and results in the placement of many individuals beyond the comfortable limits of their physical or mental capacity. These people require a good deal of help and guidance from the nurses to enable them to give regular and adequate service. After six years of operation the Health Units, particularly those open from the beginning, have become very much a part of the

## DISTRIBUTION OF HEALTH UNIT VISITS (FIRST VISITS)

BY MONTHS AND BY CAUSE

FISCAL YEAR—1952-53



life of the employees in the departments which they serve. Deepening mutual understanding of functions, problems, and needs, has increased the demands on the Health Units both in volume and in depth. Nursing counsellors are constantly striving to eliminate superficial and unnecessary visits through education and encouragement of independence and by alertness to the significance of underlying problems.

The ratio of employee health unit visits to the total number of persons supervised is a clear indication of the extent to which departments are utilizing this service. This "Index of Participation", expressed as the average monthly number of employee health unit visits per 100 personnel supervised, was 68 for the past fiscal year compared to 70 in the previous year. This would appear to represent the maximum load which can be handled by the present staff of nursing counsellors.

Table 2 summarizes the work conducted at the Health Centre. Approximately 6,500 examinations and consultations and emergency treatments have been carried out. All sections of the Health Centre have worked to full capacity throughout the year. Due to lack of space much important work has had to be turned away. The psychologist, in developing his program, has conducted a total of 631 consultations or interviews, and has worked very closely with all other services of the division, and in particular with the psychiatrist, the welfare supervisor, and the nursing counsellors. He is called upon to advise and make recommendations on a host of personal problems, chief among which are problems relating to job efficiency and adjustment generally, suitable placement for emotionally disturbed or physically handicapped employees, vocational guidance to youthful or dissatisfied employees, and employees not making the most of their capacities, and lastly, reorientating the attitudes of maladjusted employees to their jobs and life in general.

Table 3 gives a breakdown of retirements from the government service, for medical reasons, by cause and age groups. In keeping with the experience of previous years, diseases of the circulatory system, the nervous system, and of the bones and organs of movement, constitute the chief causes of separation. Of the 170 separations reported, 144 (approximately 85 per cent) occurred within the 50 to 60 year age group.

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## Hospital Design

When the Health Grants program was inaugurated in 1948 it was decided to re-examine the program in the light of experience at the end of the first five years of its operation. It is interesting to note that 603 hospitals were assisted under the Hospital Construction Grant during that period, in providing a total of 46,714 new patient beds, plus 5,928 bassinets for the newborn. Assistance was also given in the construction of 5,685 nurses' beds. A further breakdown of new beds added, by types of hospitals, is: 26,271 active treatment, 11,385 beds in mental hospitals, 4,308 T.B. and 4,750 beds for chronically ill and convalescent patients.

The total amount of moneys available for Hospital Construction for this five-year period was \$66,389,048. Of this amount, \$56,890,232 was committed and approved for various projects and of that amount \$35,635,481 was actually spent. The smaller amount spent is understandable when it is realized that grant payments are made in quarterly instalments as construction progresses.

The Hospital Design Division continues to provide a consultant service for those concerned with hospital planning and, during the year, the Division has also provided sketches for hospital and laboratory buildings required by other Divisions of the Department.

## Narcotic Control

### General

No difficulty was experienced by officials of the Division of Narcotic Control in co-operation with licensed narcotic distributors in maintaining adequate stocks of narcotic medication within the country during the year. The policy of close co-operation with the United Nations Narcotic Commission was effectively maintained. These two factors ensured that those needing medication of this nature experienced no difficulty in obtaining it at any time. Similarly, every co-operation was extended to us by those countries providing our source of supply.

While there was no apparent increase in our addict population during the year, the problem of juvenile addiction entered the picture to a somewhat larger extent than heretofore. Administrative and enforcement efforts on the part of this Department in co-operation with officials of the R.C.M. Police, and the various provincial and municipal judicial and enforcement units are largely responsible for the fact that such summary treatment was accorded those found responsible for contributing to juvenile delinquency in respect to narcotic matters that we have good reason to believe the problem of addiction among juveniles will not become an important one in Canada.

It can only be reiterated that illicitly imported Heroin is the chief drug of addiction in Canada. Over 90% of the cases involving infractions of the Opium and Narcotic Drug Act during the year were in respect to this drug, whereas the quantity diverted from legal channels was entirely insignificant, amounting in fact to less than nine ounces. Of this total quantity eight ounces were involved in a loss from a shipment in transit to Canada from another country and in respect to which it has never been determined at what point either in Canada or outside the country the actual loss occurred.

Prices asked for narcotics in illicit channels remained at such a steady level that it was apparent a ready source of supply from other countries was available to addicts.

### Legitimate Trade

Through the medium of 147 licensed narcotic wholesalers adequate supplies for legal purposes were constantly maintained. There were 146 licences to import granted during the calendar year 1952, 50 licences covering exportations were also issued during the year. A strict system of licensing of imports and exports is maintained in compliance with regulations laid down by International Authorities and our internal control is such that narcotics and medication having a narcotic content may only be distributed by licensed firms to other wholesalers, physicians, druggists, dentists, veterinary surgeons and hospitals, on a system of requisition which may only be signed by individuals authorized or entitled to do so.

Each licensed distributor, who dealt in narcotics other than Codeine Compounds, was required to submit monthly reports of all sales transactions involving narcotics. This information is carefully catalogued and by so doing we are in a position at all times to know the purchase requirements of all persons entitled to have narcotics in their possession for commercial or professional reasons. Similarly this method of records makes it possible for the Division to enquire where it is felt that there is a possibility of excess narcotic medication being obtained. Moreover, as an added measure of control, three auditor-pharmacists are employed to check the transactions of all narcotic wholesalers. These auditors also investigated security measures afforded narcotics at hospitals and Government institutions. During the year under

review, the narcotic activities of 119 licensed wholesalers were audited. Moreover, 877 hospital inspections and 45 visits of a special nature were completed across Canada by these three auditor-pharmacists.

Estimated consumption of narcotics, as also the volume of imports, remained at steady levels, bearing in mind the increase in population. The actual quantities involved in these two factors may be reviewed by and compared with previous years by consulting table 11 and table 12, pages 117 and 118.

## Crime and Convictions

During the judicial year ended September 30th, 1952, there were 371 convictions under the Opium and Narcotic Drug Act. Of these, 350 were for illegal possession and 21 for illegal sale or offering for sale. Of these convictions, 336 involved Heroin and the remainder were divided as follows: Opium 1, Poppy Heads 6, Morphine 13, Dicodeide 1, Codeine 1, Cocaine 5, Marihuana 3, Demerol 4, and alleged drug 1. The foregoing is a further indication that illicitly imported Heroin is the predominant factor in the Canadian addiction picture.

With respect to the convictions noted above, it is interesting to observe the categories of penalty that were assessed by the Courts.

6 months and less than 1 year .....	143
1 year and less than 2 years .....	120
2 years and less than 3 years .....	63
3 years and less than 4 years .....	22
4 years and less than 5 years .....	9
5 years and less than 6 years .....	11
6 years and less than 7 years .....	1
7 years .....	2

Five Chinese, 1 Pole and 1 Hindu were involved in the convictions under consideration, the remaining offenders being British, Canadian, or American.

Further to convictions during 1952, here follows a brief review of two cases, both involving known traffickers:—

On September 11 last, R.C.M. Police officials in Vancouver watched while a well-known trafficker cached a cigarette package containing 100 capsules of heroin in a laneway in that city. Careful surveillance of this cache was maintained during the balance of the day by officers hidden at strategic points and others equipped with "Walky-Talkie" equipment posted at greater distances. At about 8.30 in the evening another trafficker was observed approaching the area and he was seen to retrieve the cache and discard the cigarette package which had been marked for identification, and depart in a taxi. His arrest and conviction followed and he was sentenced to 7 years in penitentiary, fined \$500 or in default 6 months additional and moreover to be whipped once with 5 strokes of the paddle. He subsequently appealed this sentence and the Appeal Court dismissed his application. The individual stated he was not an addict.

Another case concerning a woman, who was a known addict as well as a distributor, and a Canadian-Chinese, involved almost 14 ounces of heroin.

These two were living together on a farm in British Columbia and came to the attention of the R.C.M. Police through the medium of informants who advised that they were actively engaged in trafficking. Arrangements were made whereby the house and its occupants were kept under observation and during the course of such observation the activities of the man going back and forth digging at certain spots in and about the farm buildings indicated there

were good reasons to believe that some unusual circumstances obtained. After dark, it was possible for the police to investigate the points where the man had been observed to go and a quantity of heroin was found. Both individuals were thereupon arrested and a complete search of the premises revealed a total of 6,077 grains of heroin concealed at various places.

They were convicted and the man received a sentence of 4 years in penitentiary (he was some 70 years of age) and \$200 or 2 months additional. The woman was sentenced to 12 months' imprisonment with hard labour and the same fine. On appeal by the Crown this sentence was subsequently increased to 2½ years.

Convictions are summarized in Table 13, page 119.

### **Retail Control**

The policy of securing from retail druggists across Canada successive reports of sales of narcotics was perpetuated and enlarged during the year. Approximately 8,000 of these reports were received and checked, revealing in a few cases personal addiction on the part of professional people; many cases of known addicts obtaining narcotics from doctors on the basis of some medical condition, real or otherwise; and new cases of addiction being super-imposed on a medical condition. All such information is of course tabulated and maintained on permanent records by the staff of the Division.

As heretofore complete co-operation was extended the Division by registrars and senior executives of all Medical and Pharmaceutical Associations throughout Canada.

### **International Co-operation**

Canada's international obligations in respect to the movement and internal control of narcotics were carefully observed. All required reports were submitted to the United Nations Narcotic Commission. Moreover, some 60 reports of seizures in the illicit traffic were forwarded for purposes of information and evaluation.

## **Quarantine, Immigration Medical and Sick Mariners Services**

Health aspects of international travel and of immigration, the treatment of sick mariners and the diagnosis and treatment of leprosy, continued this year to be among major concerns of the Department and the Acts dealing with them were administered by the Quarantine, Immigration Medical and Sick Mariners Services.

### **Quarantine Service**

The Quarantine Service functions to reduce the hazard of certain infectious diseases being brought to Canada from without by applying health measures to traffic arriving by water, air or at the inland boundary. Its statutory authority is the Quarantine Act, with the Quarantine Regulations. There are six major quarantinable diseases: smallpox, plague, typhus, cholera, yellow fever and relapsing fever. Measures designed to prevent the entry of smallpox rely on vaccination.

By international agreement, co-ordinated by the World Health Organization, Canada participates in the effective operation of measures designed to

keep foreign going vessels from carrying plague. Plague is transmitted, chiefly, by a species of rat flea and a reservoir of infection may be maintained in rats. Measures against plague are directed chiefly to maintaining all foreign-trade vessels as free from rats as possible. Craft are inspected every six months and, in addition, on each arrival from plague infected ports. Vessels found infested with rats are fumigated. The construction of rat-proof vessels is encouraged and has done much to reduce port to port travel by rodents.

Chlorination of water supplies and water available for ships and aircraft has done much to reduce outbreaks of cholera on international conveyances.

Effective lice-killing agents, such as D.D.T., have proved a powerful weapon in preventing the transmission of typhus and relapsing fever.

For Canadians journeying to the yellow fever-infected areas of South America and Central Africa the Quarantine Service has established 14 centres strategically located from coast to coast where immunization against yellow fever may be obtained and an International Certificate of Inoculation and Vaccination issued free of charge.

Concern was felt during the year as a result of an outbreak of smallpox in Great Britain, north of Manchester, and in the closing months of the year with a new outbreak involving Lancashire and Yorkshire. Incomplete figures at the year's end indicated the existence of at least 27 cases, six of whom had died.

On February 13, 1952, a ship which had landed a suspected case of smallpox at Gibraltar arrived at Saint John, N.B. All persons on board were screened and all necessary measures were taken. A crew member who developed a suspicious illness was temporarily isolated but subsequently released. Specimens from this patient were examined at the Department's Laboratory of Hygiene, which co-operates with the Quarantine Service in supplying laboratory diagnostic facilities.

Fully organized quarantine stations are operated at Halifax, N.S., Saint John, N.B., Quebec, P.Q., and William Head, B.C. The Quebec quarantine station has five substations, located at Rimouski, Port Alfred, Sorel, Three Rivers and Montreal. The William Head quarantine station has three substations, at Vancouver, Victoria and Esquimalt, B.C. Quarantine inspections of aircraft are carried out at Gander, Nfld.; Sydney, N.S.; Moncton, N.B.; Dorval, P.Q.; Malton, Ont.; and Sea Island airports.

During the year, 3,288 vessels, having on board 453,313 persons, of which 214,799 were crew members, 238,394 passengers and 120 distressed seamen and others, were inspected

Local Customs Officers, in their capacity as Quarantine Officers at unorganized ports, reported the entry of an additional 602 vessels.

A total of 899 vessels were inspected for vermin and rodents. Of these, 604 had come from plague infected ports. Of those inspected, 52 required fumigation, 352 were granted exemption certificates and 353 had their existing certificates endorsed. A total of 79 rats and 91 mice were recovered. 142 vessels were inspected and had their certificates extended one month or were remanded to some other port for future action.

A total of 12,748 aircraft, having on board 500,846 persons were inspected during the year.

A total of 1,151 inoculations against yellow fever were made during the year. Approximately 70,000 International Certificates of Inoculation and Vaccination were issued.

Statistical data on Quarantine activities are presented in Tables 14 and 15, pages 120 and 121.

## Leprosy

Canada operates two Leprosaria. Patients from Eastern Canada are hospitalized at Tracadie, N.B., while those from Western Canada are hospitalized at Bentinck Island, B.C.

Six patients were treated at the Tracadie Leprosarium during the year, in a new and modern wing of the Hotel-Dieu de St. Joseph Hospital so designed that the most modern treatment could be provided with patients having the maximum amount of comfort and recreation. A total of twelve beds are available, six for males and six for females. Recreational facilities include a woodworking shop and bathing beach on the Gulf of St. Lawrence.

Three patients were treated at Bentinck Island during the year. All were of Chinese origin. This institution is built on the cottage system and patients have the freedom of the Island. Those who are able to work are employed at routine chores. Some have gardens and raise chickens, others enjoy the excellent fishing in the vicinity of the Island.

The staff of the Island consists of a graduate nurse assisted by a caretaker. Medical care is under the direction of the Quarantine Medical Officer in charge at the nearby William Head quarantine station.

*Leprosy in Canada.* Leprosy is no longer an important public health problem in Canada, although in the 19th century there were over 100 cases in a certain localized area. In recent years no person has contracted the disease in Canada, although in 1951-52 three new cases were discovered and in 1952-53 a further case was found. It is believed that all these individuals were in contact with the disease outside Canada.

Children are much more susceptible to leprosy than adults. After contracting the infection there is an incubation period varying from six months to twenty years before the onset of symptoms. Modern drugs have done a great deal to brighten the prognosis although they have proven to be ineffective in certain difficult cases. A number of former leper patients in whom an apparent cure has been effected have been discharged from hospital and are carrying on relatively normal lives in their home communities. Their condition is checked from time to time by the local Medical Officer of Health. From time to time local health authorities are requested to examine young people who have been in contact with cases of the disease.

### LEPROSARIA ANNUAL CENSUS

1952-53

	Tracadie	Bentinck Island
Remaining from last year .....	5	3
Admitted during the year .....	1	0
Died during the year .....	0	1
Discharged during the year .....	0	0
Remaining in hospital .....	6	2

## Immigration Medical Service

The Immigration Medical Service is responsible for the examination of immigrants, for giving medical advice to the Department of Citizenship and Immigration and for the treatment of migrants and visitors at Canadian ports of entry.

Examinations are conducted throughout Europe and the British Isles by Canadian Medical Officers at offices located at London, Liverpool, Glasgow,

Belfast, Paris, Brussels, The Hague, Copenhagen, Stockholm, Helsinki, Karlsruhe, Hanover, Bremen, Linz, Rome and Athens. In certain other centres examinations are done by local doctors representing Canada or by teams of one or more Medical Officers sent out from the various offices.

Immigrants from countries other than Europe are pre-screened by medical representatives of the Immigration Medical Service located at Hong Kong, New Delhi and Karachi. At the year's end arrangements were being completed for the appointment of medical representatives at Bombay, Madras and Calcutta. Migrants to Canada from all other countries are pre-screened by reputable physicians.

No immigrant receives final medical clearance until arrival in Canada. The granting of final medical clearance and the treatment of migrants and visitors who become ill en route to Canada is the responsibility of the Immigration Medical Service at the major ports of entry. Facilities exist at the following seaports and airports: St. John's, Nfld., Gander Airport, Stephenville, Nfld., Sydney, N.S., Reserve Airport, N.S., Halifax, N.S., Moncton Airport, N.B., Saint John, N.B., Quebec, P.Q., Montreal, Dorval Airport, Ottawa, Toronto, Malton Airport, Edmonton Airport, Vancouver, Sea Island Airport and Victoria, B.C.

Immigration Hospitals are operated at Halifax, N.S., Saint John, N.B., and Quebec, P.Q. They serve not only for providing treatment but also for the observation of persons presenting medical diagnostic problems. These hospitals are fully equipped and provide up-to-date facilities for the diagnosis, treatment and comfort of the patients.

The majority of immigrants undergo a complete medical examination overseas. This examination includes an X-ray of the chest and any additional radiological or laboratory investigation that may be required. All immigrants arriving in Canada are again inspected and a complete medical examination, including chest X-ray, is carried out where indicated.

All examinations by Canadian Medical Officers overseas and in Canada are free of charge. Persons reporting for examination to offices at London, Liverpool, Glasgow, Belfast, Dublin and Paris receive their chest X-ray free. As a result of the careful medical screening migrants receive the incidence of tuberculosis among recent immigrants to Canada was found in several surveys to be lower than the morbidity rate existing in Canada.

At the year's end there were 41 full-time Canadian Medical Officers and one temporarily employed non-Canadian working in Europe.

A total of 160,374 migrant examinations were carried out abroad and 134,748 on arrival in Canada, 59,582 of these people coming from the British Isles, 97,016 from Europe and 3,776 from the Orient.

The movement of migrants to Canada from overseas continued in an increasing flow until early winter when it was restricted temporarily until the approach of spring and then permitted to gather momentum again.

In September, 1952, the Department commenced to provide free treatment for indigent immigrants who become ill en route from ports of arrival to their final destination in Canada or who, following arrival at their destination, become ill while awaiting placement by officials of the Department of Citizenship and Immigration.

During the year Immigration Medical Officers carried out examinations and immunizations and prepared reports for various divisions of the Department of National Health and Welfare and for other government departments.

Statistical data on the immigration medical activities of the Department are contained in Tables 16 and 17, pages 122 to 124.

## Sick Mariners Service

The Sick Mariners Service provides free medical care and hospitalization to crew members of vessels paying Sick Mariners dues, at ports in the provinces of Newfoundland, Nova Scotia, Prince Edward Island, New Brunswick, Quebec, British Columbia and those parts of Ontario and Manitoba which border on Hudson and James Bays. The Service operates under the authority of Part V of the Canada Shipping Act and has existed since Confederation, being one of the oldest prepaid medical schemes in existence.

Sick Mariners dues are collected on a compulsory basis from all vessels arriving from foreign ports and from all vessels operating in the interprovincial coastal trade; on a voluntary basis from vessels of Canadian registry employed exclusively in fishing and vessels operated by the Dominion of Canada. Fishing vessels are only permitted to pay Sick Mariners dues if the first payment is made prior to the first fishing voyage in a calendar year. Sick Mariners Dues are levied by Collectors of Customs on vessels arriving at any port in the provinces mentioned above. The amount of dues collected is fixed by statute at two cents per net registered ton and is payable each time a vessel arrives, but not more than three times in a calendar year. The minimum payment is fixed at \$2.00.

Medical care is provided for all conditions except permanent insanity. No sick mariner is entitled to free treatment for a period longer than one year. The conditions under which free treatment is authorized are kept as simple as possible. The sick seaman applies to his captain, who completes a concise form indicating particulars about the crew member and the vessel. The seaman then takes the application to the local Collector of Customs who verifies the facts and endorses the application, referring the patient to the port physician. In case of accident or emergency the seaman may be sent directly to the doctor or hospital for sick mariners.

During the year Sick Mariners Clinics were operated at Sydney, Halifax, Saint John, N.B., Quebec, Montreal and Vancouver. Plans were laid for a new Clinic at Victoria, B.C. Treatment was provided by port physicians employed on a part-time salary basis at Victoria, Port Alberni and Powell River in British Columbia; Port Alfred and Gaspé in Quebec; Lunenburg, Windsor, Liverpool, Pictou, Digby, Lockeport and Yarmouth in Nova Scotia, and at Shippegan and Tracadie in New Brunswick. In all other ports, in the smaller outports and many fishing hamlets, there were port physicians attending sick mariners on a fee-for-service basis.

Marine hospitals were operated at Sydney and Lunenburg, N.S. The hospital at Lunenburg was closed at the end of the fiscal year and henceforth sick mariners at Lunenburg will be treated in the new Fishermen's Memorial Hospital. Besides sick mariners, the Marine Hospital at Sydney treats Indians and Eskimos, who are the responsibility of the Indian Health Services of the Department, and also admits Mounted Police and certain patients who are the responsibility of other government departments.

Details of Sick Mariners treatment in relation to vessels' dues and expenditures are to be found in Table 18, page 125.

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## RESEARCH DEVELOPMENT

### Child and Maternal Health

Among the major functions of the Division of Child and Maternal Health are co-operation and consultation with provincial health authorities in the promotion of optimal health for mothers and children by: definition of desirable standards for maternal and child health services; evaluation of existing facilities and services in relation to the nature and extent of local problems; review and assessment of projects under the health grants program in relation to provincial requirements and programs; provision of lay and professional educational media; stimulation of and participation in research on maternal and child health problems. These functions have been fulfilled in the past year in the following ways:—

#### Definition of Standards

A step in this direction has been taken by the preparation of "A Nursing Manual on Premature Care" which outlines suggested standards of hospital care for this special group of infants. Prematurity accounts for 25 per cent of the deaths in the first month of life.

#### Evaluation of Existing Facilities and Services

A pediatric consultant spent several months in one province evaluating hospital facilities for the care of newborn infants and pediatric patients. A report was prepared for the provincial health authorities on each hospital, recommending improvements in facilities and procedures. The nursing consultant visited hospitals in two provinces to advise their nursery and maternity supervisors regarding nursing practices for the care of the newborn, with special emphasis on the premature infant.

#### Assessment of Health Grant Projects

The Division has acted in a technical advisory capacity in the review of projects under the Health Grants Program, particularly those utilizing the Crippled Children's Grant, but also projects of the General Public Health, Professional Training and Research Grants, concerned with the health of mothers and children. Several provinces have purchased additional incubators for the care of premature infants, and one province has purchased hospital equipment for the terminal sterilization of infant formulas. A considerable proportion of the Crippled Children's Grant has been spent on training facilities for cerebral palsy victims in Quebec, Ontario, Saskatchewan, Alberta and British Columbia, but funds have also been utilized to develop crippled children's registers and to provide diagnostic and treatment services for children disabled in other ways.

#### Educational Media

One of the most important functions of this Division has always been the provision of health information regarding mothers and children for both lay and professional people. Major activity in this field has been the complete revision of the popular publication, "The Canadian Mother and Child". The other major publication on child care, "Up the Years From One to Six" has continued to be well received. "The Nursing Manual on Premature Care" promises to fill a real need for printed instruction in this field.

## Research

The major research project carried on in the past year has been the completion of the study in Winnipeg of Staphylococcal Infection of Newborn Infants and Mothers. One of the most promising projects in this field initiated recently under the Health Grants is a study of the causes of spontaneous abortion, undertaken at Dalhousie University.

## Standard Indices of Progress

Maternal and infant mortality rates are valuable indications of the status of maternal and child health.

### Maternal Mortality

Figures for 1951 indicate that the maternal mortality rate has remained at its low level of 1.1 per 1,000 live births. There was considerable variation in rates from one province to another, the highest provincial rate being 2.1, and the lowest 0.4 per 1,000 live births. There were 405 maternal deaths in 1951. The principal causes of maternal deaths are as follows:

Toxaemia of pregnancy .....	27%
Complication during delivery .....	35%
(haemorrhage is the most common)	
Puerperal sepsis, and deaths associated with infection .....	12%

A high proportion of those maternal deaths are preventable. Adequate prenatal care, with facilities for laboratory tests, would discover cases of toxaemia of pregnancy in the early stages. Better hospital facilities with transfusion services would contribute greatly to a reduction in deaths from complications at delivery. The saving of mothers' lives is only one objective of maternity care. Few figures are available concerning the amount of ill-health suffered by women as a result of pregnancy, but it is believed to be considerable.

### Infant Mortality

In 1951 there were 380,101 live births in Canada and 14,584 infant deaths, of which 8,579 infant deaths occurred within the first month. The infant mortality rate of 38 per 1,000 live births is the lowest ever achieved. There was considerable variation among the provinces, the highest rate being 55 and the lowest 30. In addition, 7,010 babies were stillborn.

These neonatal deaths and stillbirths, many of which are due to immaturity, birth injury and asphyxia, can be reduced most effectively by an improvement in the care given the mother during her prenatal period and at delivery. The leading causes of infant deaths are as follows:

Respiratory diseases .....	17%
Immaturity .....	14%
Congenital malformations .....	14%
Injury at birth .....	10%
Asphyxia and atelectasis .....	8%
Gastro-enteritis .....	7%

The deaths from infection, respiratory diseases and gastro-enteritis are perhaps the most readily preventable through parental education and the provision of good medical facilities for treatment of cases. Deaths from birth injury and asphyxia should be eliminated by good obstetrical practices, and deaths from immaturity reduced.

## Dental Health Division

In dental health work, attention is concentrated on broadening the field of preventive dentistry by reducing the incidence of dental caries, irregular teeth and periodontal disease, with a view to improvement of general health. The Department makes financial aid available to provincial dental health programs through the National Health Program, provides consultant and advisory services to the Provincial Health Departments and to the Canadian Dental Association, and carries on research and educational work in the field of dental health. Close liaison is maintained between the Department and the Canadian dental profession.

### Grants

Considerable aid has been given to provincial dental services through the General Public Health Grant. During the past four years six of the eight existing provincial dental health divisions have been established with assistance from the grant and all provinces have utilized it to develop and extend preventive dental services with special emphasis on services for children. Mobile Dental Clinics, some employing Dental Hygienists have been established, and the number of stationary establishments have been increased; dental services have been improved in many sanatoria and mental hospitals; dentists, dental assistants and nurses have been employed and many dental personnel have been enabled to undertake training in public health.

### Research and Surveys

The Brantford Water Fluoridation Caries Study being carried out by this Division was continued in co-operation with provincial and municipal health departments, with statistical assistance from the Research Division. In this study, the teeth and gums of 1,800 children in Brantford, where the public water supply is being artificially fluoridated, are being compared with those of 1,800 children in Sarnia, who serve as a fluoride-free control group, and with 1,800 children in Stratford where the water has an optimum natural fluoride content. Examinations conducted during the year include those of the 1,800 children in Brantford and 1,800 in Sarnia.

In conjunction with the Nutrition Division, the Division participated in a Canada-wide nutrition study of Indian children which served to obtain data on the dental health of children in various parts of Canada.

A Clinical study of the effectiveness of the topical application of a stannous fluoride solution to the teeth of children for the prevention of tooth decay was set up with the help of the Research Division, and the Food and Drug Divisions. Over 1,000 Ottawa school children are involved in the study.

### Education and Information Services

To further the cause of prevention, dental health education material was prepared in the form of booklets, folders, posters, for use in schools, health units, industrial plants, and private dental offices. Informational material was designed to advise the public, particularly children, concerning the most effective methods of preventing and controlling tooth decay, periodontal disease and malocclusion. Taking into consideration the difficulty of estimating accurately the number of people suffering from infected teeth, alveolar abscesses, pyorrhea, lack of masticating powers and personal disfigurement, the Department has endeavored to make Canadians realize that only through regular early dental care of the child can dental disease among adults be brought within controllable limits, and diseases related to dental infection and deficiency be avoided.

## Other Activities

Other dental health activities carried on by the Department included inspection and enforcement services in connection with the formulae of dental drugs and dentifrices and with the marketing of dental remedies, under the provisions of the Patent or Proprietary Medicines Act; control of the use of narcotics in the private practice of dentistry; and the provision of dental health services for Indians.

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## Epidemiology

The increasing importance of epidemiological methods in the study and detection of disease problems as well as in evaluating clinical and public health procedures is becoming more apparent each year. This trend has developed particularly since 1948, when the National Health Grants Program was introduced in Canada.

The Epidemiology Division, therefore, has met increasing demands for technical and consultative services chiefly within the Department and from Provincial Health Departments. These requests have largely been in connection with the investigation of epidemics and the planning and direction of research studies of communicable and chronic disease problems amongst large and small populations. Some of these have included studies such as Canada's Sickness Survey, 1950-51, and the Detroit-Windsor Air Pollution Health Study which is now in progress.

## Federal Health Grants

In 1952-53, as in the past, a considerable number of Research and Public Health Grants, using epidemiological methods or procedures, were approved. These grants included a wide variety of projects, some of which were largely administrative in scope, whereas others were more specialized in the use of statistical, laboratory or sociological methods or a combination of one or more. These projects vary considerably and deal with different aspects of the cause, prevention and control of communicable and chronic diseases, including accidents.

Some studies, such as the prevalence of Sylvatic Plague and Rocky Mountain Spotted Fever in arthropods, have received Federal support for a number of years. Others on the epidemiology and isolation of Coxsackie and Polio-myelitis viruses in Canada were continued from the previous year. Prevalent studies on Multiple Sclerosis in various cities in Canada, such as Winnipeg and Vancouver, were also continued. In the field of immunology, grants provided for the production and evaluation of influenza vaccine in Quebec and B.C.G. vaccine in Ontario and Quebec. Amongst other projects receiving support, grants provided funds for the investigation of the cause and transmission of staphylococcus aureus hemolyticus infection in Winnipeg hospitals, and also for the study of the effect of air pollution on health at Windsor and Detroit. The importance of smog as a cause of death and disability had been demonstrated repeatedly by such disasters as occurred in Donora, Pennsylvania, in 1948 when 20 people died, and more recently, in London, England, in December, 1952, when approximately 4,000 people succumbed as the result of smog exposure. Because of such disasters the increasing importance of air pollution as a health hazard has been realized by health and industrial authorities in recent years.

## Consultations

The Division has given consultative services to a number of projects, some of which have been associated with Federal Health Grants, and others, which originated in the federal or provincial health departments.

At the request of the Provincial Health Department of Nova Scotia, an epidemiological study of a severe poliomyelitis epidemic at Tatamagouche, Nova Scotia, was carried out the first week of April, 1952. Aside from the unusual seasonal incidence of this infection, twelve paralytic poliomyelitis cases occurred in a village of 628 inhabitants. The paralytic attack rate was 1.9 per cent, and one death occurred. An epidemic of mild "polio-like" illness occurred concurrently with the onset of the paralytic cases. Forty-seven per cent of the population developed mild gastro intestinal, respiratory or febrile symptoms. A Brunhilde type of poliomyelitis was isolated by Dr. Andrew Rhodes of the Connaught Medical Research Laboratories.

The Indian Health Services also asked the Division for assistance to help combat an epidemic of measles which occurred in the Arctic in March and April, 1952. This epidemic swept through the Indian and Eskimo populations bordering Ungava Bay in northern Quebec, and also invaded the south shore of Baffin Island at Frobisher Bay and spread west to Cape Dorset. An overall mortality rate of ten per cent occurred amongst the Eskimos and Indians of Ungava Bay. The attack rate was approximately one hundred per cent of those exposed, even in the older age groups, indicating that the population had not previously been exposed to this infection. Gamma globulin and medical supplies were dropped by parachute to some of the more isolated communities, and along with antibiotics played a major part in reducing the death toll from this disease.

Assistance was also given the province of Alberta in combating the rabies epidemic amongst the wild animal population in that province. The disease first appeared about June, 1952, in the northern part of the province and by the end of March, 1953, had spread over the entire length and breadth of Alberta, and into Saskatchewan. Although the control of this disease has largely been a veterinary problem, a number of humans have been bitten by wild or domestic animals. Health authorities have looked with considerable concern on the possibility of human infections.

## Surveys

Aside from the projects which have received financial support through the Federal Health Grants and which have received consultant services by the Epidemiology Division, a large scale study was planned and carried out across Canada last year to determine the protective value of influenza vaccine. Approximately 4,600 doses of quadrivalent influenza vaccine were made available by the Defence Research Board and were distributed by the Epidemiology Division to Provincial Health Departments across Canada for trial purposes. A further 4,300 doses of "control" material were also distributed. Provincial Health Officers co-operated in this project and requested industrial, hospital, and other groups to participate in the administration of vaccine and controls to their employees. They were also asked to keep a record of respiratory illnesses which occurred amongst these groups during the winter months of 1952-53. Although a general epidemic of influenza "A" did not occur in Canada last winter, outbreaks were reported in local areas. It is therefore hoped that influenza vaccine was given in areas where the diseases occurred and that the protective value of the vaccine can be demonstrated.

The Division has also co-operated with the Health Department of the City of Ottawa and other local groups in determining the incidence of puerperal mastitis, as well as assessing some of the basic epidemiological factors related to the onset of multiple sclerosis and poliomyelitis.

### Items of Special Interest

Because of increasing demand for and the application of epidemiologic methods in defining and analysing Public Health problems, the Division established three sections to deal with technical information, disease prevention and control, and Public Health methods. These have now been staffed and have taken over that portion of the divisional program which was in their special field of activity. A draughting service is also provided in the Division for the production of graphs, maps and diagrams for the Epidemiology and other Divisions in the Department.

In November, 1952, the fifth Federal-Provincial Conference of Venereal Disease Control Directors was held in Ottawa for the purpose of assessing venereal disease treatment and control programs and procedures in Canada. A number of resolutions and recommendations were made for presentation to the Dominion Council of Health. These resolutions emphasized the need for a continued and sustained effort in order to further reduce the V.D. rate in Canada. Although the incidence of syphilis has continued to decline since the introduction of penicillin, gonorrhoea rates have not decreased to the same extent in recent years, and in some localities have even increased. Non-specific urethritis infections have also caused much concern in some areas. The Conference also stressed the need for the evaluation of present diagnostic and control procedures with a view to improving and simplifying some techniques and methods now in use.

Following a recommendation of the Dominion Council of Health in 1952, the Division's Disease Prevention and Control Section has made considerable progress during the past year in drafting a standardized communicable disease reporting and control system for Canada. The objective of this work of course is to have a more uniform reporting and control system for communicable diseases in all provinces of Canada. In this standardization program, emphasis has been placed on the simplification and elimination of reporting by the physician whenever possible; and to suggest control measures which are consistent with scientific knowledge of disease communicability and transmission.

T.B. control activities are largely related to the provision of grants under the National Health Grants Program. This has been discussed elsewhere. However whether or not a direct relationship exists between the provision of hospital beds, drug facilities, and the availability of trained physicians, the T.B. death rate has fallen to an all-time low of 17.1 per 100,000 in 1952.

The Division continues to co-operate in the production of Canada's Sickness Survey report. Bulletin No. 1, on Family Expenditures has been published and a series of 10 to 12 Bulletins is expected to be produced in the near future.

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### Laboratory of Hygiene

Probably the most important item during the past year has been the beginning of construction of the new Virus Building. It is anticipated that the building will be completed within the next fiscal year and will provide badly needed and thoroughly modern accommodation designed to protect the workers and facilitate the work.

The branch laboratory located in the Ottawa Civic Hospital has continued to develop and towards the end of the fiscal year, the Ottawa Civic Hospital agreed to provide an additional laboratory for special investigations to be carried out by a medically qualified bacteriologist. The co-operation provided by the staff of the Ottawa Civic Hospital has been invaluable.

During the year, the Laboratory secured the services of a former member of the staff, Dr. J. F. Morgan, an expert in the study of Tissue Culture techniques. Another member was added to the staff of the Virus Section in the person of Dr. S. F. Kitchen.

During the year, three more provincial surveys of public health and hospital laboratory services were made in Newfoundland, Prince Edward Island and Nova Scotia. Official reports recommended the orderly expansion and development of public health and hospital laboratory services. This completes detailed surveys in five provinces. As a result of these studies, it is believed that there are great avenues for development looking to the provision of adequate laboratory diagnostic services in rural and some urban hospitals to assist the practising medical profession.

One additional small study, carried out at the request of the Director General of Medical Services, Department of National Defence, involved a visit to the training centre at Camp Borden where intensive courses of instruction are provided for hospital laboratory technicians. A review of the manual of instruction was carried out by technical officers of the Laboratory of Hygiene. Other training programs which continue to interest the Laboratory of Hygiene include courses at certain universities and educational institutions designed for the training of hospital laboratory technicians. In addition, the Laboratory of Hygiene offers certain refresher courses to public health laboratory workers as time and facilities permit. Advice and assistance were given to the Civil Defence group in connection with the development of emergency kits for public health laboratories. This work was undertaken in co-operation with a sub-committee of the Technical Advisory Committee on Public Health Laboratory Services.

Various members of the staff were represented on national and international committees and one member attended, as an expert consultant, an international meeting held at Dubrovnik, Yugoslavia, under the auspices of W.H.O.

## **Tissue Culture**

A new section of Tissue Culture was established on October 1, 1952. The purpose of this Section is to utilize the methods of growing tissue cells outside the body and to apply these methods to problems existing in other Sections of the Laboratory of Hygiene.

The recent development of a chemically-defined medium that will support the survival of tissue cells outside the body has made it possible to apply tissue culture techniques to many problems. Studies are now in progress to improve and simplify this medium and to investigate the metabolism of normal and malignant cells. To date, this has involved the preparation of 40 modifications of the synthetic tissue culture medium. The effect of antibiotics at the cell level is being studied and work on the nutrition of certain fastidious micro-organisms has been initiated.

One of the most urgent Public Health projects at the present time is the development of suitable vaccines for poliomyelitis and other viruses, employing tissue culture and synthetic media. Studies on the propagation of poliomyelitis and influenza viruses in tissue culture are now being conducted as a joint project between the Tissue Culture and Virus Sections. The aim of these studies is to determine the nutritional substances required for virus propagation in cells and to look for chemical means of preventing virus growth.

Between October 1, 1952, and January 1, 1953, specialized equipment and training staff were acquired and many of the standard tissue culture methods were simplified and rapid procedures for handling large numbers of cultures developed. Since that time, a total of approximately 1,200 tissue cultures, made from 8 different tissues, has been prepared. Of these, 360 cultures, representing 7 different types of tissue and 3 different methods of cultivation, have been made for virus studies. In collaboration with Dr. O. A. Trowell, of the British Atomic Energy Research Establishment, special tissue culture media have been devised for studies on the radio-sensitivity of tissue cells. Appreciable quantities of synthetic tissue culture media have also been supplied to the Science Film Division of the National Film Board.

## Biologics Control

The duties of the Biologics Control Section are divided into two main roles—control and research. The control work is that carried out under the authority of the Food and Drugs Act, for which the Laboratory of Hygiene acts in a technical and advisory capacity to the Chief Dominion Analyst. The research pertains almost entirely to immunological problems and, as well, mode of action of antibiotics.

(a) *Sub-section—Biologics Control*—Tests for sterility, safety, identity and potency of biological drugs, such as vaccines, toxoids, antisera, etc., were carried out as usual. Twenty-six commercial diphtheria toxoids and 59 commercial tetanus toxoids were assayed, and all were found satisfactory. A bacteriological survey of smallpox vaccines on the Canadian market was undertaken. One lot of vaccine was found unsatisfactory because of its high bacterial count and its sale was prohibited. Pyrogen testing of market parenteral fluids and of blood transfusion materials for the Canadian Red Cross Blood Donor Service was carried out to capacity. Six hundred and eighty-eight samples were tested and all but 31 (4.5%) were found to be free from pyrogens.

Inspections of Canadian, United States and European manufacturing establishments, holding a Canadian biologic licence, were continued. Five manufacturers were refused a licence because of unsatisfactory conditions in their sterile filling rooms, and three manufacturers had their licences temporarily suspended until unsatisfactory conditions were rectified and their plants improved so as to meet the Canadian requirements.

A survey of diphtheria and tetanus toxoids from different countries was started late in the year. Toxoids from ten different countries have already been obtained and are now under test. Preliminary results indicate that European diphtheria toxoids are somewhat more potent than Canadian, but this country's tetanus toxoid is more effective than the European.

The Laboratory of Hygiene, in collaboration with five other institutions in Canada and the United States, participated in an inter-institutional study on the precision of the potency assay of alum precipitated toxoid. The results of the study were published in the *Journal of Immunology*, February 1953.

(b) *Sub-section—Immunology*—The large scale oral immunization studies with humans, which started two years ago in collaboration with the Provinces of British Columbia and Manitoba, are soon to be completed. Approximately 1,500 adults and children will have participated in the study. The final results are not available as yet but the preliminary results indicate that oral immunization may be a useful method for giving booster doses against diphtheria and tetanus (lock-jaw).

Smaller scale studies, to determine the pattern of oral immunization, are continuing in collaboration with the Ontario Veterinary College.

A new study on the value of annual booster (oral and parenteral) doses for tetanus toxoid was started in collaboration with the Ontario Veterinary College. This new study will cover a period of four to five years.

A new study on the immunization of infants against diphtheria, whooping cough and tetanus to determine optimal dosage and value of booster doses was started. The latter is in collaboration with City Health authorities of Montreal.

Studies on the development of a suitable assay for *H. pertussis* (whooping cough) vaccine were continued and a tentative assay technique established. Vaccines presently in use in human field trials in the United Kingdom were obtained and are being tested. The value of the method will be shown when the results of the human field trials are available.

Studies on *Cl. botulinum* toxins and toxoids were started again after a lapse of a year, due to shortage of staff. A stable toxin has been prepared and immunization studies on experimental animals (mice, guinea pigs and rabbits) are in progress.

This past year, a start was made towards the establishment of a "library of cultures" for anaerobic bacteria. Present stock cultures are being re-examined and studied, and new cultures are being obtained.

The Laboratory of Hygiene was represented at the World Health Conference on "Diphtheria and Whooping Cough", sponsored by W.H.O. and held in Yugoslavia in October 1952. Proposals to this group regarding the establishment of an International Standard for *H. pertussis* (whooping cough) agglutinating serum was accepted and the W.H.O.'s Biological Expert Committee have actively taken this matter up. Such standardization is important since it allows for the comparison of whooping cough studies by the different workers who are using this test as the index of immunity. At the present time, due to wide differences in techniques, such comparison is not possible. The Laboratory of Hygiene is participating in this study and, as well, will make available the results of its studies in this field.

The Laboratory of Hygiene prepared a standard agglutinating *H. pertussis* serum and a standard *H. pertussis* agglutinable suspension was provided by Eli Lilly and Company, Indianapolis, U.S.A. These were distributed to sixteen different laboratories in various countries throughout the world. The results from most of these have been returned and show that the agglutination test for whooping cough can be standardized.

(c) *Sub-section—Chemistry and Pharmacology*—Further studies on the mode of action of Penicillin were undertaken. The problem of the effects of Penicillin on *Staph. aureus* was studied, using paper chromatography, Warburg techniques, and by observations of changes in the chemical activities of Penicillin treated cultures. Preliminary results suggest there is a difference in arginase activity between treated and non-treated cultures and this feature is being studied closely.

Studies on antibiotic inhibitors were continued. Attempts to obtain an inhibitor for Streptomycin have so far yielded negative results.

Research into chemical methods for the assay for antibiotics, both when alone and when in combination with other antibiotics, has been undertaken and should prove of value in control work.

(d) *Sub-section—Antibiotics*—Routine testing of antibiotics for potency (351 samples), sterility (200 samples), Toxicity (140 samples) and pyrogens (107 samples) were carried out. One sample was not allowed to be distributed in Canada because of low potency, and four samples were rejected due to failure to meet the toxicity test requirement. More than 3,000 samples of antibiotics were submitted during the fiscal year and this represented 150 types of antibiotic material which are now on the Canadian market.

The Laboratory continued its service of providing low potency standards of antibiotics to Provincial Health Laboratories and to D.V.A. hospital laboratories and research establishments. Two hundred vials of standards were distributed in this period.

The Laboratory of Hygiene, at the invitation of the World Health Organization and in collaboration with other world laboratories, carried out extensive studies on proposed new International Standards for Terramycin, Aureomycin, Dihydrostreptomycin and Bacitracin. In addition, upon invitation of the U.S. Food and Drugs Division, many tests were carried out on the U.S.'s new standard for Neomycin.

An intensive study on the non-specific bactericidal activity of normal human serum is now in progress. An attempt is being made to identify the individual serum components responsible for this effect against certain bacterial pathogens. To do this, it has been necessary to develop an entirely new set of techniques.

Other activities carried out by this subsection were concerned with reviewing new drug submissions on antibiotics and aid in the revision of Food and Drug Regulations governing antibiotics. Considerable time has been spent on re-drafting the Laboratory of Hygiene's test methods for antibiotics and these should be available shortly.

## Bacteriology

In the field of medical bacteriology, the prime purpose of this laboratory is to aid the Provincial Departments of Health in the identification of bacteria isolated from materials submitted to their laboratories, by the provision of special diagnostic reagents, by the carrying out of special tests and by the giving of refresher training courses to technical personnel from these laboratories. This Section is also concerned with the sanitary control of shellfish and shellfish-producing waters and with restaurants and food dispensing establishments. How these functions were performed during the year 1952-53 will be described under the various headings:

### (1) Medical Bacteriology

(a) *Enteric Bacteriology*: The principal functions of the laboratory in enteric bacteriology are the maintenance of the "National Salmonella Typing and Reference Centre" and the "National Shigella Typing and Reference Centre".

(i) *The National Salmonella Typing and Reference Centre*—A total of 671 cultures were received at the Enteric Centre for identification, 199 more than during the previous year. Of these, 530 were 'typed' as *Salmonella*. Reports of *Salmonella* isolations from the provincial laboratories were received and a detailed report submitted to the Eighth Annual Meeting of the Technical Advisory Committee on Public Health Laboratory Services. Three types—*S. californica*, *S. heidelberg* and *S. panama*—identified at the Laboratory of Hygiene and *S. poona* reported by the Ontario Department of Health Laboratories were reported for the first time in Canada. Of the *Salmonella* cultures received at this Centre, 25 types were identified of which the commonest were *S. typhi-murium* (34 per cent), *S. typhi* (14.5 per cent) and *S. paratyphi B* (10.5 per cent). A paper on "Salmonella Types in Canada", reporting the observations of the National Salmonella Typing Centre from 1948 to October 1952 was presented at the annual meeting of the Canadian Society of Microbiologists.

(ii) *The National Shigella Typing and Reference Centre*—This Centre at the Laboratory of Hygiene, approved as the National Centre by the

Technical Advisory Committee on Public Health Laboratory Services at its annual meeting in 1951, received international recognition as the National Centre for Canada during the past year. A total of 72 *Shigella-Alkalescens-Dispar* cultures were received during the year. *Shigella sonnei* and *Shigella flexneri* 2a were the predominant strains.

(iii) Of the cultures of other groups received, most (40%) were "Paracolon" organisms.

(iv) *Esch. coli* typing—The laboratory has now prepared diagnostic sera for the first 26 O groups, which makes possible the serological identification of the more common types of *E. coli*. In addition, O and OB sera have been prepared for coli groups 055 and 0111, which with 026 are considered the types to be of etiologic significance in infantile diarrhea. An investigation was made of a small local outbreak of infantile gastroenteritis, in which 15 cases were examined. Stool cultures from these revealed coli 0111 present in 2 cases. No recognized enteric pathogens were cultured from any of the others.

(v) *Standard Antigens and Diagnostic Antisera*—The demand for standard *Salmonella* antigens prepared by the Laboratory of Hygiene increased for the fourth consecutive year. This year requests for 297,650 ml. of these antigens were filled, almost 21 litres more than in 1951-52. Similarly with the diagnostic antisera prepared and distributed by this Laboratory. A total of 1,060 ml. of these sera were distributed during the year, compared with 724 ml. distributed during 1951-52. This Laboratory is now supplying the full requirements of the standard antigens of 9 of the 10 Provincial Public Health Laboratories (Ontario excepted) and the D.V.A. hospitals and is meeting all requests for diagnostic antisera from these sources. Distribution of these reagents has been strictly limited to the Provincial Public Health Laboratories and the Department of Veterans Affairs.

*Antigens distributed*:—*S. typhi*—H, O and Vi; *S. paratyphi* A—H and O; *S. paratyphi* B—H and O; *S. paratyphi* C—H and O; and *Salmonella*—H non-specific.

*Diagnostic Antisera* distributed: 4 *Salmonella* polyvalent O sera; 7 *Salmonella* O group sera; 8 *Salmonella* H sera; 5 *Shigella* group sera; 2 *Alkalescens-Dispar* group sera; and *E. coli* 055—O and OB sera and *E. coli* 0111—O and OB sera.

(vi) *Special projects*—The study of the survival of enteric pathogens in dried fecal material on filter paper was completed and a paper "The Filter Paper Method for Collecting and Transporting Stools to the Laboratory for Enteric Bacteriological Examination" was presented to the C.P.H.A. laboratory section, December 1952. The results of this study indicated that for *Salmonella* stools, the 'paper' method was at least as satisfactory as the usual glycerol-saline method. Projects under investigation are: the development of serological methods for the separation of mixed cultures of *Salmonella*, improvements in the preparation of standard antigens, and the antigenic mutation of *Salmonella* types.

(vii) *Training Course*—A three and one-half weeks' course of lectures and laboratory work in *Enteric Bacteriology* was given by members of the Bacteriology Section May 12-June 4, 1952. Thirteen attended the course, from the Provincial Public Health Laboratories, the R.C.N. and the R.C.A.M.C.

(b) *Haemolytic Streptococcus and C. diphtheriae*: The Laboratory continued to offer to the Provincial Laboratories its services in the typing of haemolytic streptococci and diphtheria bacilli. An epidemic of acute nephritis

occurring in Nova Scotia was investigated by Dr. R. W. Reed of the Nova Scotia Public Health Department who submitted a number of cultures of haemolytic streptococci for identification. It is particularly interesting to find that 53 of the 58 Group A streptococcus cultures investigated were 'Type 12' strains, in view of recent reports from the U.S.A. and Australia of outbreaks of streptococcal infection associated with a very high incidence of acute nephritis in which this same type of streptococcus was incriminated. Twenty (20) cultures of *C. diphtheriae* were received for typing. The 'Streptococcus Unit' distributed 545 cc. of Lancefield grouping sera to other laboratories during the year. There was an increase in the number of Antistreptolysin O serum titrations carried out during the year from 325 in 1951-52 to 409. Three hundred and sixty-seven (367) of these were for the Sick Children's Hospital, Toronto, as part of a long term study by them of rheumatic heart disease. Three lots of commercial Streptolysin O reagent were tested and reports and suggestions submitted to the manufacturer.

(c) *Staphylococcal Infections*: Staphylococcal infections appear to be on the increase in hospitals and their control poses a most difficult problem. An investigation of these infections in a local hospital was started during the year and is continuing. Antibiotic-resistance and phage-typing of the strains is being studied. It was necessary for this study to develop phase-typing techniques. Phages and propagating strains have been secured from the Quebec Provincial Laboratories and the Staphylococcal Reference Centre at Colindale, London, and phages have been prepared for all the more generally recognized types. There is need for standardization of staphylococcal phase-typing on both the national and international levels, as exists for the phage-typing of the typhoid bacilli. Results to date indicate a high proportion of the strains antibiotic-resistant. Of the cultures examined, 89% were resistant to Penicillin and 58% resistant to Aureomycin and Terramycin, while only 4.6% were resistant to Chloramphenicol and no strains were found resistant to Erythromycin or Neomycin by 'in vitro' tests. In an outbreak of infantile gastro-enteritis in another hospital, bacteriological examination of stools indicated the probability of so-called 'staphylococcal diarrhea'.

## (2) *Sanitary Bacteriology*

In this field, the Laboratory continued to provide services to the Food and Drugs Divisions and to the Division of Public Health Engineering, with particular emphasis on the shellfish-producing areas in the Maritime Provinces.

(a) *Sanitary Control of Shellfish-producing Areas*: The Laboratory of Hygiene collaborates with the Department's Division of Public Health Engineering and with the Federal Department of Fisheries in the control of all areas used for the fishing of shellfish in the Maritime Provinces. This system of control has been in effect for many years and has proved most satisfactory to all concerned. The mobile laboratory of the Laboratory of Hygiene carried out bacteriological surveys of 5 areas in Prince Edward Island and New Brunswick during the year and reports were submitted to the Inter-departmental Shellfish Committee for action.

(b) *Shellfish Toxicity Control*: The routine control of 'mussel-poison' in clams and mussels in the Eastern Maritimes was carried out according to scheme drawn up in March 1952 by the Inter-departmental Shellfish Committee. A total of 266 samples were received from New Brunswick, Nova Scotia and Newfoundland. Toxicity levels were, again as in 1951, very low. Forty-two (42) packs of canned clams, from packing plants in New Brunswick, were examined and none were found to be toxic.

(c) *The Self-purification of Clams*: There are considerable stocks of polluted clams in the Maritime Provinces and it would be doubly advantageous

if these could be cleansed and marketed without risk to the public health for (1) the income to the clam industry would be increased and (2) the removal of dense stocks now growing in contaminated areas would to a great extent eliminate the health hazard that clams bootlegged from these sources now represent. Preliminary investigations by the Department of Fisheries indicated that under certain conditions heavily sewage-polluted clams cleanse themselves. Our Laboratory carried out a series of experiments at St. Andrews, N.B., during May and June designed to locate a suitable area for cleansing, and to determine some of the conditions essential for a satisfactory commercial cleansing process. The work carried out during 1952 indicated that clam-cleansing by relaying in special floats was both practical and safe and as a result a small scale semi-commercial experiment is planned during the summer of 1953. The results of the investigations by this Laboratory and of those of the others co-operating in this project were reported in MS. No. 503 of the Fisheries Research Board.

(d) *The Evaluation of Bacteriological Reports in Assessing the Sanitary Quality of Shellfish-Producing Waters:* An extensive research project was carried out in Prince Edward Island during July, August, September and October in an effort to determine the effects of rainfall and land-wash on pollution levels in tidal estuaries. This project, when completed, should add valuable information to the interpretation of results obtained in routine bacteriological surveys. A total of 800 water samples and 33 samples of shellstock oysters were examined in the routine manner. In addition, 82 water samples were checked for salinity, 297 samples were analysed by the new molecular filter technique, 297 waters and 33 oyster samples were analysed for the presence of fecal streptococci, and 36 soil and 13 feces samples were examined for coliform bacteria and enterococci. This project is being continued in 1953. A preliminary report was presented to the Inter-departmental Shellfish Committee at its 1953 annual meeting.

(e) *Bacteriological Control of Shucked Oysters Imported from the U.S.:* In Co-operation with the Food and Drug Divisions, a check was maintained on the bacteriological quality of shucked oysters imported from the U.S. Forty (40) specimens from the Montreal market were tested during the year. Some improvement in the quality of these oysters has been noted as a result of these examinations and the close liaison maintained between the Department and the U.S. authorities.

(f) *Other Analyses:* One hundred and thirty-seven (137) samples of gelatin and 4 samples of agar-agar were bacteriologically tested for the Food and Drug Divisions and 400 samples of water for the Public Health Engineering Division.

(g) *Identification of Meats:* A continued check has been maintained for the illegal sale of horsemeat, with samples being routinely submitted by the Ottawa City Health Department and the Food and Drug Divisions. One hundred and eighty-nine samples were tested, of which 2 were misbranded. Production of antisera necessary for these tests has been maintained.

(h) *Restaurant Surveys:* At the request of the Department's Canteen Committee, 6 cafeterias located in various government buildings in Ottawa were inspected by our bacteriologist and suitable samples bacteriologically examined. One hundred and four (104) samples were taken for bacteriological examination, and the results reported to the Canteen Committee.

(i) *Milk:* At the request of the R.C.A.F., a survey of milk dispensing facilities at the Rockcliffe Air Station was carried out by this Laboratory. A total of 99 milk samples, 14 can rinse and 3 miscellaneous specimens were tested. Considerable variation in milk quality was noted between different suppliers. A report with suggestions for dealing with the particular problem was submitted to R.C.A.F.

(j) *Water Purifier*: A water purifier for field use was submitted by the Department of National Defence (Army) for evaluation of its effectiveness in the purification of water for drinking. Numerous tests were carried out using various naturally and artificially contaminated waters. A detailed report was submitted to the Department of National Defence.

(k) *Freeze-drying*: Lyophilization of bacterial cultures, sera and antigens on the Edwards Freeze-Drier was continued throughout the year. A total of 12,273 ampoules were processed through the apparatus during the year. In addition, the apparatus was used to concentrate 850 ml. of special enzyme preparations.

## Parasitology

Through the kindness of Dr. T. W. M. Cameron, Director of the Institute of Parasitology, Macdonald College, P.Q., an arrangement was made whereby the Sub-section of Parasitology was transferred during the Fall of 1952 from the Laboratory of Hygiene to the Institute. The major reason for the transfer was the acute shortage of space in the Laboratory of Hygiene building in Ottawa. It did appear most desirable, however, to arrange that our studies in the field of parasitology be co-ordinated with those at the Institute of Parasitology. These arrangements are subject to review when the matter of accommodation in Ottawa shows improvement.

During the year, a total of 165 specimens for diagnosis were received from various Provincial Departments of Health and the Department of Veterans Affairs.

A proficiency evaluation survey was undertaken in which all of the ten Provincial Laboratories and four of the Armed Service laboratories participated. To date, 22 unknown specimens have been distributed.

The University of Saskatchewan (Regina College) requested assistance in the form of teaching material to be used in their training course for technicians. A master set of prepared slides, together with bulk specimens for students were provided to this institution.

Two papers have been published: "A Survey of the Incidence of Trichinosis in Rats in British Columbia" and "On the Incidence of Human Trichinosis in Canada".

A collaborative study of Hydatid Disease in northwestern Canada was undertaken in May, June and July. Collaborating agencies were the Institute of Parasitology, Laboratory of Hygiene, and the Indian Health Services, Department of National Health and Welfare.

Results indicate that human hydatidosis is widespread in Indians from these areas. Information has been collected on 92 proved or suspected cases with hydatid cysts in the liver and lungs. Examination of 114 dogs killed in Indian villages showed that 32, or 28 per cent, harboured the tapeworm, *Echinococcus granulosus*, and that eggs of this parasite passed in the faeces of the dogs served as the source of infection to human beings. Further, it was found that dogs are infected by being fed infected lungs of wild herbivora. Hydatid cysts are common in moose and caribou and occur in elk, coastal deer, and white-tailed deer. The cysts have not been found in the buffalo of Wood Buffalo Park. The wild herbivores acquired their infection by ingesting eggs of *E. granulosus* passed in the droppings of wild carnivora harbouring this tapeworm. The wolf is the important wild carnivore host and coyotes and foxes also play a role. The first record of infection in coyotes was made during this survey. The wolves, coyotes and foxes acquire the infection by preying or scavenging on the wild herbivora.

Skin tests were made on over 800 natives, with an Australian antigen. Positive reactions were seen in 2.4 per cent of the general population, and in four of eleven known positive patients. It is believed that the antigen is quite specific but that false negatives occur in over 50 per cent of the cases.

## **Virus**

The major activities of the Virus Section during this fiscal year were related to diagnostic services rendered to the Provincial Laboratories of Health, the Departments of National Defence and Veterans Affairs, the Indian Health and Immigration Medical Services of this Department and to various hospitals and institutions. Several field and laboratory investigations on current virus epidemics were accomplished in collaboration with Provincial Departments of Health and the Indian Health Services of this Department. Studies on immunological response to polyvalent influenza vaccines in old age groups were concluded and a survey on the efficacy of several commercial influenza vaccines was undertaken. The Virus Section, as the Canadian W.H.O. influenza centre, has been frequently exchanging information and materials with the world influenza centres in London and Geneva during the past year and results of analytical work on current epidemic strains of influenza virus were forwarded to these centres. Research work was carried out successfully on further developments of stable non-infective reagents for the diagnosis of virus diseases and efforts have been initiated in developing tissue culture techniques for the laboratory diagnosis of virus diseases, particularly for poliomyelitis. This work has been greatly facilitated through the addition of a Tissue Culture Section to the Laboratory of Hygiene.

## ***Investigations of Virus Epidemics***

In March, 1952, a severe localized outbreak of poliomyelitis occurred in Tatamagouche, Nova Scotia. At the request of the Provincial Department of Health, a field and laboratory study was undertaken in collaboration with the Division of Epidemiology of this Department and the Connaught Medical Research Laboratories, Toronto. The interesting features of this epidemic included the unusual seasonal incidence and the appearance of a mild respiratory and gastro-intestinal illness at the same time as the paralytic poliomyelitis. The laboratory study at the Connaught Laboratories of stool specimens from paralytic cases showed the presence of a Brunhilde type of poliomyelitis virus. Attempts by the Laboratory of Hygiene at isolation of Coxsackie viruses from the same specimens and from stools of non-paralytic and contact cases yielded negative results.

In April, 1952, an epidemic of measles of unusual severity occurred in the native population of the Ungava Bay region, Northern Quebec. At the request of the Indian Health Services of this Department, field studies of this epidemic were undertaken together with the Division of Epidemiology. These studies revealed the presence of an epidemic of clinical influenza in that population at the same time as the measles epidemic. These findings were confirmed by laboratory tests with the patients' sera, which indicated that influenza virus Type B had been the causative agent.

In June, 1952, an epidemic of influenza made its appearance in Cape Breton, N.S., with some scattered cases in adjoining counties. At the request of the Provincial Department of Health of Nova Scotia, a laboratory study with patients' serum specimens was undertaken and established virus influenza Type B as the cause of the epidemic.

An outbreak of aseptic meningitis occurred in July, 1952, at Prince Edward Island. The clinical features of this epidemic were very similar to

those of an epidemic which had caused some concern on the Island in 1949. This Virus Section undertook a field and laboratory study and isolated several strains of Cocksackie Type B from fecal specimens of patients recovering from the disease.

In February, 1953, an influenza epidemic again went through the Canadian provinces. Clinical specimens for virus isolation and serological tests were received from most provinces. Virus isolation attempts on throat washings were successful in 21 per cent of a total of 53 samples tested. All virus strains, but one, were identified as A-prime subtypes, similar to Scandinavian, European and American strains recently isolated and identified by the W.H.O. influenza centre, London, England. One strain was found to be influenza virus, Type B. Laboratory tests with acute and convalescent phase sera of patients confirmed the results obtained with the isolation work. Results of strain analysis revealed a marked deviation from the antigenic pattern of A-prime strains isolated in 1951 and 1949. However, examination of sera of persons recently immunized with polyvalent influenza vaccines indicated that antibody formation had taken place not only to the previously isolated A-prime strains but also to the subtype A-prime strains isolated in the current epidemic.

The Virus Section, in collaboration with the Division of Epidemiology investigated the serological response of human volunteers to several commercially produced polyvalent influenza vaccines. It was found that a significant antibody rise had developed in the persons' sera to all antigenic components contained in these vaccines and that the height of response was similar with all vaccines tested.

Similarly, in conjunction with the Division of Epidemiology, an investigation into the immunological response to influenza vaccines in old age groups was concluded. It was noted that the development of antibodies to the antigenic components of the vaccine in a group of individuals averaging 76 years of age compared very favourably with that experienced by a control group of younger persons with an average age of about 25 years. These results indicate that influenza vaccines may give protection to old age groups in a similar degree to that found in younger people.

### *Diagnostic Services for Virus Diseases*

The sero-diagnostic service was established in 1950 in collaboration with the Provincial Departments of Health, the Departments of National Defence and Veterans Affairs and the Indian Health and Immigration Medical Services of this Department. This service has been expanded further each year and recently another serological test (Weil-Felix) has been added to the list of diagnostic procedures on viral and rickettsial diseases available at the Laboratory of Hygiene. The addition of dried guinea pig kidney reagent for the diagnosis of infectious mononucleosis to the list of diagnostic reagents available at this laboratory has received a very favourable response from the Provincial Laboratories of Health. Diagnostic kits for the collection and shipment to this laboratory of specimens from cases of suspected smallpox have been prepared for the Immigration Medical Services and have been distributed to the various Quarantine Stations at Canadian ports.

A total of 1,210 sera were received from the Departments mentioned above.

The Laboratory of Hygiene carried out 3,341 complement fixation tests and 5,615 haemagglutination tests.

A total of 331 specimens, including throat washings, stools, spinal fluids, bloods, vesicle fluids, swabs and smears from skin lesions and autopsy material were received for virus isolation and identification work.

3,034 serological tests were carried out with antigens derived from these specimens. Virus isolation and identification was successful in 19 cases.

During the fiscal year, about 4,000 vials of freeze-dried noninfective antigens and antisera were prepared by the Virus Section for the laboratory diagnosis of influenza, mumps and infectious mononucleosis. These reagents were periodically tested for specificity and stability before being distributed as standardized controls to the Provincial Laboratories of Health.

### ***Research Projects***

Investigations were conducted to improve the methods of preparing stable non-infective antigens and a process involving the use of ethylene oxide was developed for the soluble antigens of influenza and mumps viruses. A new method for the colorimetric assay of nitrogen in biological materials has been developed to assist in purification procedures on diagnostic antigens and vaccines. A method of propagation of influenza virus in tissue cultures is being explored with the object of using it in the production of diagnostic antigens and vaccines. Efforts have been initiated towards developing tissue culture diagnostic facilities in the case of poliomyelitis. A study involving the infection of immature mice with the Lansing poliomyelitis virus has been carried out this year.

### ***Serology and Clinical Chemistry—Serology***

Various measures to maintain uniformity in the blood tests for syphilis throughout the Dominion have been continued. A refresher course in syphilis serology was conducted during the past year and a survey to determine the efficiency of performance of serological tests for syphilis by Provincial Public Health Laboratories has just been completed. Collaborative studies with the Banting Institute are in progress in an effort to develop a synthetic antigen for the serodiagnosis of syphilis.

### ***Preparation and Distribution of Reagents***

All ten Provincial Public Health Laboratories are using standardized antigens and complement prepared by the Laboratory of Hygiene. During the year about 65 litres of Kahn antigens, as well as smaller quantities of Kolmer, Mazzini and V.D.R.L. antigens, were distributed. In addition, 38 litres of guinea pig serum (complement), prepared and dehydrated at the Laboratory, were used in Provincial Laboratories. Considerable interest has been shown by the Provincial Laboratory Directors in the use of cardiolipin antigens for routine testing and antigens standardized at the Laboratory have been distributed for comparative studies.

### ***Refresher Course***

A refresher course was presented to senior personnel of Provincial Public Health Laboratories in September. Representatives from eight provinces attended the course.

### ***Serological Survey***

During the year another valuation study was conducted to determine the efficiency of performance of serodiagnostic tests for syphilis by Provincial Laboratories. Eighty-seven specimens from syphilitic donors and 101 specimens from nonsyphilitic individuals were sent to each of the participants. The results of the survey are being compiled.

### ***Investigations***

(a) *Synthetic Antigens:* Studies on the substitution of synthetic compounds for the naturally occupying cardiolipin and lecithin presently used in cardiolipin antigens have been continued in collaboration with Dr. Eric Baer of the

Banting Institute. Several synthetic saturated lecithins as well as stearyl glycollecithin have been used in place of the egg yolk lecithin. A limited degree of antigenic reactivity has been observed on substituting a synthetic phosphatidic acid for cardiolipin. A preliminary report will appear in 'Science' shortly.

(b) *Positive Control Serum*: With the decreased incidence of syphilis, certain laboratories are having difficulty in obtaining sufficient serum to use as positive control serum in routine serological tests. By immunizing rabbits with a suitable suspension of antigen-reagin floccules, it has been possible to prepare a "positive" control serum, which seems to serve equally well.

## Clinical Chemistry

The evaluation of analytical procedures in clinical chemistry was continued. Studies in conjunction with the biochemical laboratory of the Ottawa Civic Hospital have made it possible to determine the problems encountered in a routine clinical chemistry laboratory, and to work out the solution to some of them. Surveys have been conducted in two provinces to determine the accuracy of blood glucose determinations as performed in hospital laboratories.

## Evaluation of Procedures

During the year, methods for the determination of cholesterol and cholesterol esters, uric acid, bilirubin (direct and indirect), phosphorus, calcium, sulfonamides, amylase, urea, carbon dioxide combining power, and ketone bodies in blood, and 17-ketosteroids and ketone bodies in urine have been investigated. Methods for the determination of the hydrogen ion concentration of the blood have been examined. Further work has been carried out on methods for estimating glucose, nonprotein nitrogen, creatinine, sodium, potassium and chlorides. As a result of the above investigations, methods have been selected on the basis of accuracy and simplicity with due consideration being given to the stability and reproducibility of reagents and standards.

Studies of various tests for the detection of glucose, protein, ketone bodies, bile and blood in the urine have been continued and a section on urinalysis is being prepared for a handbook.

## Surveys

With the help of two Provincial Laboratory Directors, the accuracy of blood glucose estimations has been evaluated in two groups of hospital laboratories. In one province, the Laboratory of Hygiene distributed forty different glucose solutions, ten protein-free filtrates, and then whole blood samples to the participating laboratories. As yet, only unknown glucose solutions (30) have been distributed in the other province.

## Investigations

(a) *Laboratory Studies of Diabetic Coma*: A study was started to determine the correlation between blood ketone bodies and acetone in the breath in normal individuals and in cases of diabetic acidosis and coma. The values obtained are being compared with blood glucose, carbon dioxide combining power and pH levels in blood, and acetone and sugar in urine, to determine which procedure is more useful in following the results of emergency treatment in cases of diabetic coma.

(b) *Determination of Blood Glucose*: A modification of the Folin-Wu method for the determination of blood glucose was published in the November issue of the American Journal of Clinical Pathology.

### Report of the Laboratory of Hygiene, Western Branch, Kamloops, B.C.

This report covers the fourteenth year in the operation of this laboratory. The biological and bacteriological investigations relating to tick and insect-borne diseases that were undertaken on the inception of the laboratory in 1939 have been pursued annually until now something over 422,000 field specimens (ticks, fleas and rodent tissues) have been examined. The securing and examining of this number of specimens has entailed a tremendous amount of routine, but from it a wealth of information, pertaining to the geographical distribution and ecology of the causative agents of Rocky Mountain spotted fever, plague, tularemia and other diseases, has been acquired, which could not have been obtained in any other way. During the course of the investigations, certain other diseases, met with fortuitously, were studied and reports on them published. This year a paper, "Studies on *Leptospira* Infection in Rodents and Dogs in British Columbia," was prepared and has been accepted for publication in the Canadian Journal of Comparative Medicine.

Some 15,000 specimens were examined during the present year.

Plague infection (*Pasteurella pestis*) was again uncovered in wild rodents (Richardson ground squirrels) in Alberta, but no evidence of this disease was found in Saskatchewan, or in British Columbia where it appeared in June, 1950. Rocky Mountain spotted fever infection was detected in a small collection of ticks obtained near Banff, Alta., and evidence of tularemia was found in each of the three Western Provinces. This year, for the first time in the course of these surveys, *Pasteurella tularensis* was isolated from ground squirrel fleas.

The policy, initiated a few years ago, of supplying standardized diagnostic antigens to D.V.A. hospitals and Provincial Health Laboratories has been continued. The various antigens (*Brucella*, *Proteus* and *Pasteurella tularensis*) are, for convenience in shipping, supplied in concentrated form with the dilution factors indicated. During the year, sufficient of these products was prepared to make some 90,000 cc. of standard test antigen.

In addition, 98 special diagnostic tests were carried out for other laboratories. These included biological tests for tuberculosis—tests done as an aid to Indian Health Services Hospitals—and serological tests for tularemia, Rocky Mountain spotted fever, and brucellosis.

### Canadian Tumour Registry

In the period between the 1st of April, 1952, and 31st of March, 1953, 303 tumours were registered. These were contributed by 31 pathologists from 26 cities.

During the past year, 101 tumours have been reported on by our consultants whose invaluable services are gratefully acknowledged. The composition of this Committee remains unchanged and is as follows:

- Dr. H. K. Fidler, Vancouver General Hospital, Vancouver
- Dr. J. M. Lederman, University of Manitoba, Winnipeg
- Dr. J. W. Macgregor, University of Alberta, Edmonton
- Dr. P. Masson, University of Montreal, Montreal
- Dr. N. G. B. McLetchie, Dalhousie University, Halifax
- Dr. D. F. Moore, St. Paul's Hospital, Saskatoon
- Dr. W. L. Robinson, Banting Institute, Toronto
- Dr. T. R. Waugh, McGill University, Montreal.

Consultations in special cases have been provided by Dr. W. L. Donohue, Hospital for Sick Children, Toronto, Dr. E. A. Linell, Department of Neuro-pathology, University of Toronto, and Dr. F. W. Wigglesworth, Children's Memorial Hospital, Montreal.

Requests for "follow-up" information on 302 cases have been sent out and 198 replies have been received.

A study set of female genital tract tumours was completed a year ago as announced in the Annual Report for 1952. A study set has been sent to the Professors of Pathology and of Obstetrics and Gynecology at each of the Canadian universities on indefinite loan. Fifteen requests for study sets have been received and sets have been sent out on loan for two to three month periods.

Other study sets of tumours are being assembled. The services of an assistant technician were made available in September 1952, which has resulted in considerable acceleration of this work. A set of dermatological tumours is nearing completion. So far, 68 cases are included in the set representing 39 types of dermatological tumours.

### Technical Advisory Committee on Public Health Laboratory Services

The eighth annual meeting of this Committee was held in Ottawa on December 11, 12 and 13, 1952. This federal-provincial conference, sponsored by the Department of National Health and Welfare, was attended by representatives from all of the provinces and from the Departments of Veterans Affairs and of National Defence. Dr. C. A. Perry, Director of Laboratories for the Maryland State Department of Health, was a special guest and addressed the conference on the "Control of Diagnostic Laboratory Procedures". Programs for the evaluation of laboratory performance were described and emphasized.

A special report on 'hydatid disease' in Northern Canada was presented. Because of the incidence of this parasitic infection revealed by this report and because of the increasing importance of Canada's vast north land to the defence and economy of Canada, a resolution was passed advocating further and more extensive studies of the parasites of Northern Canada.

A sub-committee appointed at the 1951 meeting to study laboratory costs presented a report which showed the approximate costs per unit of work in the different provincial public health laboratories in Canada. The figures presented were very revealing and indicated great variations in cost between different types of laboratory work and between different laboratories. This study is being continued for another year.

At the request of the V.D. Control Directors, a uniform system of reporting serodiagnostic tests for syphilis is being considered by the Committee.

Because of the general dissatisfaction with the presumptive Kahn test for syphilis serodiagnosis, the provincial representatives agreed to substitute the V.D.R.L. test as the 'screen' test in their routine syphilis serological test procedures. It was further agreed that cardiolipin antigen for the Kolmer test, to be supplied by the Laboratory of Hygiene, would be given a trial by the provincial laboratories.

Specifications for an emergency public health laboratory 'unit' for Civil Defence were drawn up and submitted to the Civil Defence Health Planning Group of the Department of National Health and Welfare.

The Ontario Department of Health Division of Laboratories offered to give a three weeks' refresher training course in Medical Mycology to personnel from the provincial laboratories.

Special reports on the year's activities by the National Salmonella and Shigella Reference Centre at the Laboratory of Hygiene and of the Tumour Registry were presented and discussed.

A special seminar was held on virus diseases, at which poliomyelitis vaccines and gamma-globulin, influenza vaccines and the Coxsackie viruses were the principal topics discussed. Several members of the Department took part in this seminar.

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## **Mental Health Division**

The Mental Health Grant continues to have a very marked influence on mental health services in Canada. As a result of the training programs which were instituted with grant funds more mental health workers are now becoming available, services are being expanded and new services organized.

During the year 32 new and 175 continuing projects amounting to \$5,335,328 were received from the provinces. This was allocated as follows: Mental Health Divisions, \$155,093; Mental Hospitals, \$2,926,880; Psychiatric Services in General Hospitals, \$500,453; Mental Health Clinics, \$600,060; Training Programs, \$368,200; Bursaries, \$322,879; Research, \$461,759.

### **Research**

The research program in the mental health field has acquired more trained and experienced workers and there are indications that benefits from the various researches will be forthcoming in future years. This year 43 research projects were supported under Mental Health Grant funds amounting in all to \$461,759.

### **Statistics**

The Subcommittee on Statistics of the National Advisory Committee on Mental Health continued to be active during the year, a two-day meeting was held and the subcommittee presented its revised system for reporting mental health statistics to the Advisory Committee. This revision was approved and subsequently put into use by the provinces. As a result it is anticipated that mental health statistics will become more meaningful.

### **Public Education**

In conjunction with the Information Services Division this Division continued an active program in public education. Many requests for materials in this field were received from provincial health educators, home and school organizations and other interested groups. Large quantities of the Child Training Pamphlets were distributed in English and French as well as considerable numbers of the booklet, "The Backward Child". The child training and mental mechanisms films continued to be widely used.

Two new pamphlets in the child training series were produced this year—"Preparing Your Child for Hospital" and "Discipline". A filmstrip based on the latter pamphlet and bearing the same title was released during the year.

A new film "Shyness" was completed in the Spring of the year. This illustrates the problem of shy children and ways in which it can be treated.

### **Consultant Services**

The Division continued to provide consultant services to provincial departments of health and to other divisions of this Department, particularly Narcotic Control, Hospital Design, Indian Health and Immigration Medical Services.

Because of the continued public interest in the problem of narcotic addiction—particularly in British Columbia—the Chief of the Division in conjunction with the Chief of Narcotic Control and the senior Legal Adviser held extensive discussions in Vancouver, Montreal, Toronto and Hamilton with various officials concerned with this problem. All pertinent data from other countries was reviewed with a view to making recommendations and an article was prepared for publication, entitled “Drug Addiction”.

### Advisory Committee on Mental Health

The Advisory Committee on Mental Health met in June 1952 at which meeting two new subcommittees were appointed—the first on Public Education for the purpose of establishing liaison with existing committees of other agencies. A subcommittee on Training was appointed to prepare a proposed minimum curriculum for psychiatric nursing personnel of mental hospitals other than registered nurses.

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## Nutrition Division

In its work of seeking to improve the nutritional status of the Canadian people, the Nutrition Division continued to provide special technical services directed towards ascertaining the kind and extent of the nation's nutritional problems and co-operated with other federal and provincial authorities in measures designed to overcome them.

Plans were completed for a National Weight-Height Survey, and the field work, which will continue into 1953-54, was begun.

The Division carried on its study of nutrition as a possible causative factor in Leber's optic atrophy, new families in the susceptible groups being found and new cases investigated. Preliminary therapeutic studies in this field have given encouraging results.

A long-term nutrition study in six Indian Residential Schools was carried into its fourth year with different methods of improving health through better diet being studied and compared and more than 1,000 children were given physical and biochemical examinations during the year.

With the aim of obtaining further evidence as to the possible effects of socio-economic conditions on nutritional status and to ascertain possibilities for a follow-up program, the Division extended its 1952 nutritional and socio-economic study in Manitoba.

Another important project concerned collaboration with the Indian Health Services in working out a rehabilitation ration for Indians discharged from tuberculosis sanatoria and the Division also advised on ration lists for road and boat crews, firefighters, hydro linemen and employed Eskimos.

The subject of emergency feeding under disaster conditions received increased emphasis this year. In co-operation with Civil Defence officials, the Division prepared a technical manual on this subject and also on the related question of improvised cooking plans. The Division helped plan, and participated in, a conference for chiefs of emergency feeding services and several conferences on welfare services. A course for civil defence workers on this phase of preparedness planning was drawn up and the Division advised on the purchase of equipment required for such instruction at a civil defence training school.

For the second consecutive year the Division carried on storage tests on food which might be used in emergency feeding and results of this study were published in the *Canadian Home Economics Journal*.

Advice was given to other branches of government on kitchen planning for hospitals, institutions and cafeterias. Inspection of food services was carried out as part of the Departmental Canteen Committee's functions.

The Division's Test Kitchen prepared bread for the Food and Drug Divisions for pharmacological studies of various constituents and for nutrient analyses related to the content of whole wheat flour.

Studies were continued on nutritionally-improved foods, nutritional improvement being obtained through the addition of skim milk powder. A pamphlet containing recipes was prepared and sent out to a selected group for trial and comments, and results of this project are already coming in.

Among other technical services, the Division performed analyses for provincial clinics, mainly for Vitamin A tolerance tests, and continued its weekly clinics for referrals from the department's Civil Service Health Units, giving complete blood and urine analyses, as well as physical examination and dietary interviews.

Educational services continued to account for much of the Division's activities. Nutritional material which had proven its worth was revised, reprinted and provided in quantity to provincial health departments for use by health personnel, teachers, food service managers and housewives. The Division's pamphlet, *Canadian Nutrition Notes*, was issued monthly as well as various lists of reference reading, pamphlets and films.

Production was begun on a new nutrition film, *Food for Freddie*, and, to stimulate public interest in healthful eating, the Division sponsored a Nutrition Photograph Contest which was so successful that it is hoped to make it an annual event.

Meetings were held in Ottawa of the Canadian Council on Nutrition and of the Dominion-Provincial Nutrition Committee, that of the Council including further study of the Canadian Dietary Standards and of a statement of nutritional status in Canada.

Visits and interviews were arranged for professional workers and students from other parts of Canada and from other countries and advice and consultation was given to many interested in the Division's field, through personal contact and through correspondence, as well as in the reviewing of manuscripts for agencies producing publications dealing with nutrition.

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## OTHER RESEARCH ACTIVITIES IN THE HEALTH FIELD

The Research Division, while not in the Health Branch, acts as the research arm to the Branch in the conduct of a variety of socio-economic studies in the health field. This includes investigations relating to medical and hospital care, studies in health insurance, surveys concerning the incidence and implication of sickness and disability, analysis of health resources including hospital and other health facilities, health personnel and health services, and the maintenance of an information centre on health legislation in Canada. The Division also makes available technical and consultative services, particularly in respect to planning and methodology, to the various Divisions and Directorates in the Health Branch. A summary of the activities of the Research Division is provided on pages 104 to 106 in this Report under the section dealing with the Administration Branch of the Department.

# WELFARE BRANCH

## I. Introduction

### Administration

The Welfare Branch can now report on a full year's operation of the new Old Age Security Act, the Old Age Assistance Act, and the Blind Persons' Act, all of which became effective on January 1, 1952.

The administration of the Old Age Security Act, providing pensions for those seventy years of age and over, was assumed by the Family Allowances Division and its regional offices because of the similarity of procedures in the two programs. The integration of the two acts progressed during the year to such a point that their activities can now be included in one report. Experience has justified the belief that the use of the Family Allowances' machinery would enable the new pensions to be undertaken with a very modest increase in staff.

Agreements under the new Old Age Assistance Act and the Blind Persons' Act have been signed by all the provinces, the Yukon Territory, and the Northwest Territories. The first full year of operation of old age assistance has demonstrated that the cost of the means test pension for the sixty-five to sixty-nine year group is less than was anticipated when the Act was passed. The number of recipients of blind persons' allowances has increased slightly in the fiscal year.

There have been no legislative changes in the Physical Fitness program and activities under the Act have continued as in former years except for the fact that the Province of Prince Edward Island did not renew its agreement, leaving seven provinces operating under agreements with the federal government. All of these provinces utilized to the full during 1952-53 the federal funds available to them under the Act.

Because of the federal grants to Canadian universities which were introduced in 1951-52, the Departmental grant to the eight Canadian schools of social work was discontinued. An interim grant for one year of \$3,000 was made to the Maritime School of Social Work. This school is not attached to any one university, but serves those in the Maritime Provinces. The interim grant was approved in order to give the school time to make appropriate arrangements for support from other sources in the area.

Applications of welfare organizations for incorporation under the federal Companies Act were examined by the Welfare Branch at the request of the Secretary of State.

An amendment to the Excise Tax Act, passed in 1950, provides for the exemption from sales tax of public institutions devoted to the care of children, the infirm and the aged, if they are certified by the Minister of National Health and Welfare to meet the requirements of the Act. This is in line with the certification of hospitals for exemption, which is carried out by the Health Branch. Twenty-seven institutions were certified during the fiscal year. This brings the total of institutions certified to 330. Eighteen applications were rejected during the fiscal year because the institutions were unable to meet the requirements of the Act. This brings the total of rejected applications to 155. One application was suspended during the year. Institutions have been asked to file periodic returns, indicating whether they are still eligible for certification under the Act.

Research continued in the field of social legislation with particular reference to community, family and child welfare, health services for indigents, and social security. Preliminary estimates on the findings of the Survey of Welfare Positions were presented to a Workshop of the Canadian Conference on Social Work which met in Quebec City in June, 1952. The technical work on the survey was completed during the year and a progress report prepared for the Personnel Committee of the Canadian Welfare Council. The final report will be published in a series of bulletins. Canadian material on a number of subjects in the social welfare field was also prepared at the request of the United Nations Department of Social Affairs.

Representation was provided to certain interdepartmental committees. These included the Civil Defence Co-ordinating Committee, the Advisory Committee on Citizenship, the Interdepartmental Advisory Committee on Immigration and its Sub-committee on Migration Policy, the Interdepartmental Committee on Social Security, and the Interdepartmental Group on Technical Assistance, which deals with requests for experts and scholarship and fellowship programs from the Colombo Plan, United Nations Technical Assistance and certain United Nations specialized agencies.

The Welfare Branch continued to arrange programs for social welfare fellowships and scholarships awarded by the United Nations for study in Canada. Fellowship holders were received from the following countries: Belgium, Chile, Egypt, France, Sweden, Switzerland and China (Formosa) (2). Scholarship holders came from the following countries: Antigua, Colombia and the Virgin Islands (2).

The Welfare Branch provided Canadian representation to certain United Nations meetings: the Deputy Minister of Welfare, Dr. George F. Davidson, was alternate delegate to the Economic and Social Council in New York in June and July, 1952; the Director of Family Allowances and Old Age Security, Mr. R. B. Curry, was the Canadian delegate to the 8th session of the Social Commission, held in New York in May, 1952; the Executive Assistant to the Deputy Minister, Mrs. D. B. Sinclair, was the Canadian representative to the United Nations International Children's Emergency Fund (UNICEF); she attended meetings of the Program Committee and the Executive Board held in New York in April and October, 1952, and in March, 1953; she served as chairman of the Executive Board in 1952.

The main Welfare Branch expenditures were as follows:

	Administration	Net Benefits
Welfare Branch .....	\$ 31,845.81	
Family Allowances .....	{ 2,297,535.68	\$334,302,320.00
Old Age Security .....		323,068,540.00
Old Age Assistance .....	{ 108,597.48	19,128,837.37
Blind Persons' Allowances .....		2,985,217.00
Physical Fitness .....	72,692.77	155,532.03
Schools of Social Work .....		3,000.00
Totals .....	<u>\$2,510,671.74</u>	<u>\$679,643,446.40</u>

## Family Allowances and Old Age Security

At the close of the fiscal year 1951-52, developments in the two fields, Family Allowances and Old Age Security, were reported separately, as though by two different divisions of the department. In fact, however, the administration of Old Age Security, from its inception, was handled by the existing Family Allowances organization with a comparatively small increase in personnel. There were two reasons for separate reports. One was that in the case of Old Age Security, payments of the pension had been made for only three months, although some months of preparation and receipt of applications had gone before. The second reason was that, at that time, the two functions of the division were quite separate and distinct. In order that the large bulk of initial applications for Old Age Security pensions might be processed in the shortest possible time, it was found expedient to keep the two areas of endeavour apart. It was anticipated that when Old Age Security operations reached a current basis, and when experience had been gained in the problems which would arise in the implementation of the new legislation, permitting policy and procedure to become more clearly defined, it would be possible to devote time and thought to the integration, from an administrative standpoint, of the two programs.

During the past fiscal year, these anticipations were realized, and a gradual unification has taken place, so that it is now possible to cover activities related to both Family Allowances and Old Age Security in one report.

### Coordination of Two Programs

In the light of the experience which has been gained to date in the administration of Old Age Security, it is generally agreed that the only functions which can be properly considered common to both Family Allowances and Old Age Security from the point of view of efficient and economical use of staff, space and equipment, are those performed by sections in Regional Offices known as "Administrative Services", "Central Registry" and "Welfare Services". Regional Offices have progressed in the coordination of these functions to greater or lesser degrees depending on individual circumstances. Throughout all offices, however, considerable headway has been made in this direction. At the present time, plans are being formulated to achieve a uniform pattern of organization for all Regional Offices. When this pattern has finally been determined, and the necessary, and in some cases minor, adjustments have been made in the present organization of these offices, the two programs will have been coordinated satisfactorily.

### Administrative Services and Central Registry

The sections called "Administrative Services" are responsible for such functions pertaining to both Family Allowances and Old Age Security as general correspondence, recording and collection of overpayments, field investigations which are not of a Welfare nature, disposition of returned cheques, maintenance of personnel records, mimeographing and photostating and stenographic services. "Central Registry" sections handle such items as reception and dispatch of mail, control and allocation of account numbers, maintenance of card indexes, destruction of dead files, and so forth. The main function of the latter sections is the maintenance of file registries including the control of file movements and the keeping of a system of B.F.'s. With a total of 691,386 active Old Age Security accounts maintained across Canada as at March 31, 1953, in addition to 2,056,354 active Family Allowances accounts, the work-load carried by these sections has increased greatly.

## Welfare Services

The role of the Welfare Section in each Regional Office, in connection with the administration of Family Allowances, has become increasingly well defined. The emphasis during the year under review has been on continuing and improved liaison with agencies and institutions which work with children. The conviction has become stronger than ever that there is no substitute for personal and frequent contact between Welfare personnel of this division and those of the agencies and institutions concerned.

In the course of the year, the staff of the Welfare Sections have been brought into Old Age Security, and the role they are to play in this program is now quite definite. As in the case of Family Allowances, one important responsibility which falls to Welfare personnel is liaison with agencies and institutions. Here it is with those bodies concerned with aged people. A great deal has already been accomplished in establishing contact with these agencies and institutions, and in interpreting Old Age Security matters to them.

Probably the most important responsibility taken on by the Welfare Sections is that in the area of trusteeships in Old Age Security. The legislation provides for the appointment of a trustee to handle Old Age Security pensions if the pensioner is incapable of handling his own affairs. It is considered that qualified Social Workers are in the best position to evaluate information and reports received in this connection. Personnel of the Welfare Sections have also been called upon to assist with difficult cases of proof of age and sometimes of residence. This assistance takes the form of personal interviews with applicants, and guidance and help to them in regard to these subjects. In addition, where necessary, arrangements are made for the setting up of tribunals in the applicant's community for the purpose of determining the age of the applicant when satisfactory evidence thereof is not available.

## FAMILY ALLOWANCES

### Legislation—New Regulations

Order-in-Council P.C. 1953-321 dated March 5, 1953, and published in the *Canada Gazette* March 25, 1953, revoked the Family Allowances Regulations previously in effect and replaced them by new Regulations. The revised Regulations do not differ radically from the former ones, but do contain some changes worthy of note. Among these are the following: (1) Formerly, in the case of a child who was attending school or receiving equivalent training and, in addition, was employed or engaged in work for which he received \$35 or more monthly, Family Allowances were discontinued; under the new Regulations no limit is placed on such a child's earnings. (2) Under the previous Regulations there was no option but to pay Family Allowances for Eskimo children to the Department of Resources and Development to be disbursed by that Department. All of these allowances are, by arrangement with that Department, paid to Eskimo parents in "kind." The revised Regulations permit payment direct to Eskimo parents. Such action would, of course, be taken in individual cases only on the recommendation of the appropriate officials of the Department of Resources and Development. The subject will require careful consideration before such action is taken.

## General

The numbers of families and children receiving allowances, and consequently the expenditures, for the month of March, 1953, were considerably larger than for the month of March, 1952, as was the case with each preceding year. The following table shows comparative figures:

	No. of Families	No. of Children	Expenditures
March, 1952 .....	1,966,721	4,530,186	\$27,174,658
March, 1953 .....	2,041,341	4,729,172	28,456,441

Total net payments for the fiscal year 1952-53 were \$334,197,684, an increase of \$13,740,011 over the previous fiscal year. Tables 19 and 20, pages 126 and 127, show additional details regarding payments of allowances.

## School Attendance and Employment

As in other years, the information on school attendance in all provinces which have been obtained strengthens the belief that Family Allowances play a vital part in assuring a high percentage of attendance. This belief is further bolstered by observations made by provincial educational authorities. For instance, in speaking of the rise in the average school attendance in his province over recent years, the Supervisor of Attendance of the Department of Education of one province stated in part "The provision of additional school facilities at the elementary and secondary levels cannot of course be ignored, but the assistance of Family Allowances without any doubt was the most outstanding element for improvement." The same official stated further "... in a large majority of the cases the teaching profession of the Province looks upon the relationship between the school attendance and Family Allowance payments as an inestimable aid in the provision of adequate educational opportunities for children."

In another province, a school inspector declared to Family Allowances officials: "You are the most effective attendance officers the province has ever had." A school authority in the latter province, in writing to the Regional Director of Family Allowances, said "The attendance of school children has been much better since the Family Allowance payments have been paid, thanks to your office and their attention to the regulations having a bearing upon School Attendance—Family Allowance requirements."

There are of course various factors which affect enrollment and attendance, and these factors differ from province to province. It is therefore difficult to assess exactly to what extent the fact that inexcusable absences from school result in a loss of Family Allowances has influenced both enrollment and attendance. The significant rise in percentages over the years since the beginning of the Family Allowances program cannot, however, be ignored. While the possible loss of Family Allowances for unsatisfactory school attendance acts as an incentive to parents to ensure that their children attend regularly, their ability to feed and clothe their children better because of the receipt of allowances is also an important aid to those who otherwise might not find it possible to send their children to school on as regular a basis as they would wish to do.

At the close of the fiscal year 1951-52, it was noted that the total number of children whose allowances had been suspended because of non-attendance at school and employment for wages showed an increase over the number for the previous year. It was felt that this was due, at least in part, to increased school enrollment and better reporting both voluntary and other. Bearing

this in mind, it is interesting to note that the figure for the year 1952-53 has decreased considerably. Reporting will have, if it has changed at all, improved, and enrollment appears to have increased. It perhaps might be concluded, therefore, that there were fewer instances, at least of non-attendance at school. The number of suspensions because of employment for wages remained almost the same, while those for unsatisfactory school attendance decreased from 14,830 to 11,817, accounting for the decrease in the total figure mentioned.

In view of the revision in the Family Allowances Regulations which permits employment without loss of allowances so long as the child is in satisfactory attendance at school, the overall number of suspensions should further decrease in the fiscal year 1953-54. Since the school-leaving age varies from province to province, being 14 in some and 15 in certain of the others, there will no doubt always be cases of suspension of allowances because of employment where the question of school-attendance is not involved.

### **Overpayments**

Again, in the past year there has been a highly satisfactory decrease in the total amount of overpayments outstanding for the entire period since the beginning of the payment of Family Allowances. During the year, overpayments amounting to \$242,881.00 were discovered and added to the \$371,708.00 outstanding at March 31, 1952, making a total of \$614,589.00. The amount recovered during the year, however, was \$279,737.00. Thus, with the amount recovered in the year 1952-53 being larger than the amount set up, the total amount of overpayments outstanding at March 31, 1953, was \$334,852.00, less than that at the end of the previous fiscal year by \$36,856.00. Table 21, page 128, gives a break-down of these overpayments as of March 31, 1953. Recalling that in February 1948, the total amount of overpayments stood at \$506,734.00, it is encouraging to note that this figure is steadily decreasing, despite the hundreds of millions of dollars paid in Family Allowances since that date.

## **OLD AGE SECURITY**

### **General**

In March 1952, 643,013 pensioners received payments totalling, for that month, \$25,831,240. Payments of Old Age Security to 686,127 pensioners in March, 1953, amounted to \$27,428,325, while total payments for the fiscal year 1952-53 were \$323,141,655. During the last months of the fiscal year under review, approximately 7,600 new applications were processed in Regional Offices each month. In the same months, an average of about 4,500 deaths of pensioners was reported, leaving a net monthly increase in accounts in the neighbourhood of 3,100. Table 22, page 129, gives more detailed statistics on payments of Old Age Security pensions.

As has been indicated, the fiscal year 1952-53 saw the processing of Old Age Security applications reach a current basis, and the number of new applications assume more normal proportions. During this period too, policy and procedure were refined, in the light of growing experience.

### **Proof of Age**

The problem of obtaining satisfactory evidence of age remained important. As the large bulk of cases involving persons well over seventy years of age was cleared, new applications received became, with some exceptions, confined to those where applicants were just reaching the age of seventy. In the case of the latter persons, it was of course necessary to obtain evidence substantiating the exact month, as well as the year, of birth, in order to determine the effective month of payment. While some difficulties were encountered in this connec-

tion, it may be stated, on the whole, that the wide variety of types of evidence which can be considered, as well as improved procedures adopted during the year, have permitted the rapid and satisfactory disposition of most applications.

In the few cases where all efforts on the part of the applicant and of the Old Age Security administration fail to produce acceptable verification of the claimed age, Regional Directors have recourse to tribunals to consider the age of the applicant. Provision for such tribunals is contained in the Old Age Security Regulations so that persons who are seventy years of age or more will not be deprived of a pension simply because their age cannot be verified by the usual documentary evidence. In turn, of course, it is not intended that pensions be paid to persons who are not yet seventy years old. Tribunals are composed of three members, one appointed by the applicant, one by the Regional Director concerned, and a chairman, who is nominated by the other two members. The members of a tribunal review whatever evidence of age may be available, generally interview the applicant and possibly other witnesses, and after consideration, provide the Regional Director with their opinion as to the birth date of the person concerned. This opinion is accepted by the Regional Director for Old Age Security purposes, subject to receipt of rebutting evidence, and the application is dealt with accordingly.

During the year 1952-53, 311 tribunals were convened across Canada. In 245 cases (79 per cent) the decision of the tribunal was favourable to the applicant in that the tribunal found the applicant to be of the age claimed or, if the age was found to be younger, this did not affect payment of Old Age Security pension. In 66 cases (21 per cent) the decision was unfavourable, in that the applicant was found younger than claimed and this decision affected payment of Old Age Security, or the tribunal was unable to reach any decision on the age of the applicant. All reports indicate that the procedure has been very well received by prospective pensioners and by the public.

### **Administration of Pensions**

Strict application has been given to the policy of not diverting an Old Age Security pension from the pensioner to a trustee unless there is satisfactory evidence that the pensioner is incapable of managing his own affairs. In addition, interpretation of the term "incapable of managing his own affairs" has been limited and does not include illness or indigency alone. During the past year, in addition to consideration given to new requests for trusteeship, a review was made of each case which had been transferred from Old Age Pension rolls and where the Old Age Pension had been paid to an administrator. The purpose of the review was to determine whether evidence of incapability satisfactory under Old Age Security policy had been, or could be, provided. As a result of this review, it was found possible to reduce from 22,820 in March, 1952, to 15,377 in March, 1953, the number of Old Age Security pensions paid to other persons on behalf of the pensioners. (See Table 22).

### **Absences of Pensioners from Canada**

In order to acquaint pensioners with the provisions of the Old Age Security legislation regarding absences from Canada, and to enlist their co-operation in notifying Regional Directors prior to leaving Canada, and on return, a special circular on the subject was enclosed with Old Age Security cheques for the month of November, 1952. This circular explained that payment of pension ceases when the pensioner leaves Canada, but may be resumed on his return to Canada after a temporary absence. Pensioners were also advised in the circular that if a temporary absence does not exceed six months, pension may be paid, on return to Canada, for up to three months of absence in any calendar

year. Examples were cited to ensure clarity. It is believed that the enclosure was quite helpful to those pensioners contemplating absences from the country, particularly to those who make yearly journeys.

### Staff—Family Allowances and Old Age Security

The following table will show the comparatively small increase in staff required to administer the provisions of the two Acts, Family Allowances and Old Age Security, over the number required when the division was responsible for Family Allowances alone. March, 1951, was the end of the last full fiscal year in which the division administered only the one program. March, 1953, was the end of the first full fiscal year in which both Family Allowances and Old Age Security were in operation:

	Authorized Establishment	Persons Actually Employed Permanent and temporary employees	Casual employees
March, 1953 .....	841	820	45
March, 1951 .....	740	694	6
Increase .....	101	126	39

### Costs of Administration—Family Allowances and Old Age Security

A comparison in administrative costs for the fiscal years 1950-51 and 1952-53, indicating the slight rise in the costs of administration because of the addition of Old Age Security to the division's responsibilities, follows:

	Dept. of National Health and Welfare	Dept. of Finance (Treasury)	Dept. of Public Works	Total
1950-51 ..	\$1,811,854	\$2,322,883	\$191,287	\$4,316,024
1952-53 ..	2,297,535	3,121,747	245,750	5,665,032

It is felt that this division has concluded a year in which considerable progress has been made in the administration of both Family Allowances and Old Age Security, and in particular in the growing integration of functions related to both fields. This progress is due to the efforts put forth by all those connected with this administration, particularly in the eleven Regional Offices, and on the staff of the Chief Treasury Officer.

## Old Age Assistance and Allowances for Blind Persons

### Old Age Assistance

The Old Age Assistance Act, effective January 1, 1952, was passed by Parliament in June, 1951, following a recommendation by a parliamentary committee on old age security which pointed out the desirability of providing assistance, subject to an eligibility test, for persons 65 years of age and over not eligible to receive the universal benefit payable at the age of 70 years. The administrative plan provided for in the Act was similar to the one origin-

ally adopted for the payment of pensions under the Old Age Pensions Act, the provinces being responsible for the administration and the federal government paying 50 per cent of the cost of old age assistance.

The completion by the federal government of agreements with the provinces, the Yukon Territory and the Northwest Territories was required in order to bring the plan into operation in each part of Canada. All provinces, except Newfoundland, provided in their agreements for the payment of old age assistance from January 1, 1952. The agreement with the Northwest Territories also stipulated that date. For the Province of Newfoundland and the Yukon Territory the effective date was April 1, 1952. All agreements, except the one with Newfoundland, provided for a maximum assistance payment of \$40 a month. The maximum assistance in the Newfoundland agreement was \$30 a month. The maximum amounts of income, including assistance, set forth in The Old Age Assistance Act were adopted in all twelve agreements. The amounts are \$720 a year in the case of an unmarried person and \$1,200 a year in the case of a married person. Where the spouse is blind, the maximum income allowed is \$1,320 a year.

At the time the parliamentary committee made its recommendation, it was assumed that the percentage of persons 65 to 69 years of age\*eligible to receive assistance would be substantially lower than the percentage over the age of 70 years receiving pensions under the Old Age Pensions Act. In its report the Committee estimated the total yearly cost to the federal and provincial governments at \$64,000,000. As the cost was to be shared equally by the federal government and the provinces, each would be required to contribute \$32,000,000 a year.

Figures available as early as March 31, 1952, indicated that the committee's estimate of cost was likely to be too high. In the estimates presented to Parliament for the fiscal year 1952-53 the estimate of the federal share was therefore reduced to \$20,000,000. Federal expenditure for the fiscal year actually amounted to \$19,128,837.37. The provinces would, of course, pay an equal amount as their share.

It may be of interest to compare the federal government's and the provinces' expenditure of \$19,128,000 each under The Old Age Assistance Act for the fiscal year 1952-53 with the expenditure under the Old Age Pensions Act from January 1, 1951 to December 31, 1951, the last twelve months the Act was in full operation. The federal share of pensions under the Old Age Pensions Act, including pensions in respect of blindness, amounted to \$102,706,000. The provinces' share would be approximately one-third of the federal share, or \$34,235,000. All pensioners under the Old Age Pensions Act, except the blind under the age of 70 years were, of course, transferred to the administration of The Old Age Security Act as of January 1, 1952.

### **Allowances for Blind Persons**

Allowances under The Blind Persons Act were paid throughout the fiscal year 1952-53 in the ten provinces, the Northwest Territories and the Yukon Territory. As at March 31, 1953, the number of recipients was 8,332 and the federal expenditure for the fiscal year 1952-53 was \$2,985,217.

It can be assumed that as many blind persons, and probably more, apply under The Blind Persons Act than applied under the Old Age Pensions Act. However, the majority of the blind are in the higher age groups and the prompt transfer to old age security of each recipient at the time he reaches the age of 70 years obviously keeps down the number of persons receiving allowances.

During the fiscal year 1952-53, there were 447 persons receiving blind allowances transferred to the administration of The Old Age Security Act. The actual increase in the number of recipients during 1952-53 was 253, the number at March 31, 1952, being 8,079.

There were no changes during the fiscal year 1952-53 in The Blind Persons Act nor in the regulations made under it. The requirements which applicants must fulfil in order to qualify for allowances refer to age, residence and income. The age requirement is 21 years and the residence requirement, not less than 10 years in Canada. The maximum amounts of income allowed, including the allowance, are \$840 a year in the case of a single person and \$1,320 in the case of a married person. Where both spouses are blind the maximum income allowed is \$1,440 a year.

Blind allowances are administered by the same provincial authorities who administer old age assistance. There are separate agreements completed by the federal government with the provinces, the Yukon Territory and the Northwest Territories. The agreement with the Yukon Territory is effective from April 1, 1952, and all others from January 1, 1952. Each agreement provides for the payment of a maximum allowance of \$40 a month. The amounts of income specified in the agreements are the amounts set forth in The Blind Persons Act. The federal government pays 75 per cent of the cost of allowances and the provinces and territories pay the remaining 25 per cent.

\* \* \*

Table 23, page 130, shows the amounts paid for the old age assistance by the Government of Canada for the fiscal year 1952-53 and relevant statistical information.

Table 24, page 130, shows the amounts paid for blindness allowances under The Blind Persons Act for the fiscal year 1952-53 and relevant statistical information.

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## Physical Fitness

The Physical Fitness Division continued to act as the agency for administering the fitness and recreation services made available under the terms of the National Physical Fitness Act. The position of National Director remained vacant during the current fiscal year.

During the fiscal year 1952-53, in accordance with agreements entered into by the provincial departments concerned, the Provinces of Alberta, British Columbia, Manitoba, New Brunswick, Nova Scotia, Ontario, Saskatchewan and the Northwest Territories co-operated with the federal government under the terms of the National Physical Fitness Act. Prince Edward Island did not renew its agreement for the year 1952-53.

### Administration

The Division continued to provide a variety of professional consultative and informational services for the assistance of provincial government departments and national organizations. It acted as a clearing house for the dissemination of information on recreation, fitness, physical education, community centres, drama, sports, the organization and administration of community and specialized programs, and related matters. The actual organization and direction of recreation and fitness projects continued to be a provincial and local responsibility and consequently the Division did not operate an activity program. Liaison has been developed and maintained with provincial governments, national associations, other countries, and with the Commonwealth in particular, thus facilitating an exchange of publications and information on the latest developments at home and abroad.

The National Physical Fitness Act (1943) made the sum of \$225,000 available annually, on a matching per capita basis, to the provinces for the promotion of fitness and recreation. In 1949, on the entry of Newfoundland into Confederation, an additional sum of \$7,000 was made available for grant purposes.

During the fiscal year 1952-53, a total of \$155,532.03 was paid in respect of financial assistance to the provinces. Of this sum, \$87,722.53 consisted of late payments for 1951-52. Late claims have yet to be paid to Ontario, Manitoba and the Northwest Territories in respect to the fiscal year 1952-53.

The total sum available for the administration during the current fiscal year was \$99,204.76, which included an appropriation of \$65,540 for the Division and a balance in the National Physical Fitness Fund, carried forward from the previous fiscal year, of \$33,664.76. This balance was fully committed prior to April 1, 1952.

The total provincial expenditures on fitness and recreation programs amounted to \$1,027,331.57, which sum includes the amount of financial assistance provided under the terms of the Act. This overall expenditure shows an increase of \$201,829.35 over the total expenditure for 1951-52. The net provincial expenditure was \$869,996.07, which in all instances exceeded the amount necessary to match the available federal grant. In four of the eight participating administrations, net provincial expenditures have increased since the previous fiscal year.

### Scholarships

Annual Scholarships for advanced training in physical education and recreation were set up in 1948, as a means of overcoming the shortage of adequately-trained key personnel in these fields. Since then, twenty-three persons have been assisted in obtaining post-graduate training.

Four post-graduate scholarships were awarded this year for study in Physical Education and/or Recreation: Miss Helen M. Eckert (Alberta); Mr. W. A. R. Orban (Quebec); Mr. J. O. E. Pearson (Ontario); and Mr. R. Rathie (Saskatchewan).

### **Informational Materials**

Information relevant to fitness, recreation, physical education, cultural activities, community centres, reports on new projects and research in Canada and other countries, new procedures and developments, has been issued in bulletin form to provincial fitness and recreation offices and on request. During the year 44 items in the English language and nine items in the French language were prepared. The total number of items distributed was 93,078.

Some of the more important publications and reports produced by the Division during the year were: Play for Preschoolers; Weaving (a manual outlining the procedures on Weaving); Weaving (a leaflet describing the informational aids available on Weaving); Fitness and Recreation Services available at the Provincial and National Level; Recreation, Physical Education and School Health Education in Canada; the Proceedings of the Second National Conference on Undergraduate Professional Preparation; N.C.P.F. Sports Opinion Survey.

The new government policy of placing some informational materials on a "for sale" basis was introduced during the latter part of the fiscal year. While it is too soon to evaluate the effect of this change in policy, there appears to be less interest at the provincial level in utilizing such items on this basis.

Study Kits have been prepared for the use of adult groups scheduling discussion periods on child development. Seven national organizations have indicated that a large proportion of their local branches have included this item on their program for 1953-54.

### **Production of Audio Visual Aids**

A coordinated package of visual aids on weaving, consisting of a brief introductory film entitled "Warp and Weft" and three related instructional film strips, was produced. These will be released early in 1953-54.

### **Preview Film Library Service**

This service has been seriously curtailed during the entire fiscal year due to inability to fill the position of reference assistant. The routine circulation of visual aids to the provinces was limited to four blocks (approximately 70% reduction) and included 10 films, and eight film strips. On completion of the provincial screening circuit these visual aids are deposited with the Canadian Film Institute on extended loan and are available to organizations on a "preview-with-a-view-to-purchase" basis at a minimum service charge.

### **National Council on Physical Fitness**

The National Council on Physical Fitness, established by Act of Parliament, Chapter 29 of the Statutes of Canada, 1943, was charged with the responsibility of promoting the fitness of the people of Canada. The Council met in Ottawa, April 21-23, 1952, and December 8-10, 1952.

### **Diploma Course for Public Recreation Personnel**

This course, limited to 30 students, was organized at the Council's request by the University of British Columbia because of the need for trained recreation leaders in the smaller towns and rural communities of Canada. The Council's

grant of \$5,000 to the University was designed to provide assistance in organizing and conducting the course. In addition to this grant, the Council provided funds for the tuition fees of 29 students selected on a quota basis from all provinces and territories, and transportation costs for those living outside British Columbia. Nine provinces and the Northwest Territories were represented.

### **Employee Recreation**

The National Council on Physical Fitness established a continuing committee in accordance with the request received from the First National Conference on Employee Recreation. This committee has met three times and has been working co-operatively with sub-committees established in the provinces under the chairmanship of the provincial directors. It is expected that the continuing committee's report on "Desirable Practices for Employee Recreation" will be completed during 1953-54.

### **Second National Conference on Undergraduate Professional Preparation**

In response to a unanimous request received from the representatives of the Professional Schools in Canada granting degrees in Physical Education and/or Recreation, the National Council on Physical Fitness convened a second conference in Ottawa in June 1952. Committees set up at the September 1951 conference presented their progress reports. Part II of the published proceedings contains the recommendations based on these reports.

### **N.C.P.F. Sports Opinion Survey**

In view of the general dissatisfaction and the many divergent opinions expressed with regard to the performance of Canada's 1952 Olympic Teams, an opinion survey appeared to be both timely and appropriate. The purpose of the survey was to obtain information in respect to athletic sports and games, with particular emphasis on international competition. The published report contains a summary of the information received. The Council made no recommendations concerning it since this is a direct responsibility of the Sports Governing Bodies concerned.

The report revealed a variety of conflicts in interpretation and misunderstandings on a number of points. Perhaps the most outstanding single factor was the attitude of the persons interviewed. Their keen interest in sport and their eagerness to contribute to its development were evident in their generous co-operation and assistance.

### **Canadian Advisory Committee on Aquatics**

At its Eighteenth Meeting in April 1952, the Council decided to establish a Canadian Advisory Committee on Aquatics and approved its terms of reference. The nine-member committee was given a wide scope for study. Its recommendations and reports must obtain Council approval prior to release and/or implementation. The Council did not accept any financial obligation regarding the committee's expenses.

Statistics relating to Physical Fitness will be found in Tables 25, 26 and 27, pages 131, 132 and 133.

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# **CIVIL DEFENCE**

## **FEDERAL RESPONSIBILITIES**

### **Agreements with the Provinces**

Extending its efforts to build up, all across Canada, services capable of minimizing the effect of disaster in both peace and war, the federal government in April 1952, authorized a Civil Defence Grant program, in the amount of \$1,400,000, to assist the provinces to develop and strengthen their civil defence plans.

Federal assistance under the Grants is directed primarily towards the improvement and extension of existing services and the provision of new services, but can also be made available to assist in financing the costs of existing Civil Defence programs established at provincial and/or municipal expense subsequent to April 1, 1952 but prior to the time when the Grants became available.

The proportion of the total sum which is available to any province has been calculated on a formula based on the relative distribution of population in target and non-target areas, and provincial governments may qualify for their portion of the Civil Defence Grants for specific projects, mutually agreed to, by making an equivalent expenditure.

During the year 1952-53, the Provinces of British Columbia, Alberta, Saskatchewan, Manitoba, and Newfoundland took advantage of this program and a total of approximately \$250,000 of federal funds was contributed on a matching basis.

During the past fiscal year, the Province of British Columbia indicated its intention to carry out a hose-coupling standardization program to increase interchangeability of fire fighting equipment. This was the third province to take advantage of the offer of the federal government to pay one-third of the cost of such a program, the other two being Ontario and Alberta.

Authority was also obtained for the federal government to enter into agreements with the provinces whereby compensation for injury or death during civil defence training in peacetime would be shared on a 50-50 basis by the provincial and federal governments. During the year 1952-53, such an agreement was entered into with the Province of Ontario and other provinces are expected to take advantage of this offer in the near future.

### **Training**

The Department continued to make civil defence courses available to the civil defence authorities in the provinces. These courses are held either at the Federal Civil Defence Staff College or at other instructional centres in Canada, the United Kingdom or the United States. Each province is allocated a certain number of vacancies and the provincial civil defence authorities determine the division between provincial and municipal candidates. During the year under review a total of 1,516 civil defence officials, instructors, nurses, doctors and technicians attended civil defence courses sponsored by the Department.

During the months of October and November, 1952, series of Civil Defence Tactical Fire Study Forums were held at the Ontario Fire College in Toronto. Senior fire officers including Provincial Fire Marshals and the Fire Chiefs of all the major cities attended, at federal expense.

## Civil Service Civil Defence (Ottawa)

Civil Service Civil Defence now has 3,000 trained civil defence personnel enrolled and organized into operational teams throughout 137 buildings. This figure includes 700 first aiders, qualified under arrangement with St. John Ambulance. Fire evacuation drills and emergency fire fighting became the responsibility of Civil Service Civil Defence in February 1953 and the majority of federal government buildings now have a quota of civil defence fire fighters, as well as police, whose training and practice is carried out under Civil Service Civil Defence instructions. The organization is becoming self-contained and has as its ultimate aim the preparation in self-help of all federal civil servants.

## Supplies and Equipment

The following is the financial breakdown, by provinces, of the training equipment which the federal government has supplied on a free basis during the fiscal year 1952-53.

British Columbia .....	\$ 45,274.21
Alberta .....	43,331.04
Saskatchewan .....	14,129.59
Manitoba .....	12,329.65
Ontario .....	68,290.83
Quebec .....	37,870.90
New Brunswick .....	9,091.00
Nova Scotia .....	22,953.19
Prince Edward Island .....	1,349.01
Newfoundland .....	9,410.94
<b>TOTAL</b>	<b>\$264,030.36</b>

Items supplied include First Aid Training Aids, Blankets, Rubber Boots, Coveralls, Steel Helmets, Stretchers, Anti-Gas Suits, Respirators, Radiation Detection Instruments, and Wireless Sets. The sums referred to are in addition to those supplies and equipment to the total value of \$250,347.88 provided to the provincial civil defence organizations in earlier years.

Contracts were let for the supply of 50 fully-equipped fire-fighting vehicles at a cost of approximately \$650,000 but supply could not be effected prior to the 31st March, 1953.

200 additional Air Raid Sirens were purchased for supply to the provinces, to be allocated to specially designated target areas, and 15 Rescue Vehicles, complete with equipment, were provided to assist the provinces with their training of rescue teams.

## Health Planning

The Civil Defence Health Planning Group continued, during the year, to initiate and co-ordinate health services planning at federal level, to act as health advisers to the Federal Civil Defence Co-ordinator and to develop a general pattern for civil defence health services for Canada to serve as a guide for planning at all levels.

In carrying out this work, the group continued to make use of the working party system under which committees of volunteer experts in the various fields concerned are convened from time to time to consider and recommend in respect of the problems involved. New working parties organized during the year included those on (a) Emergency Blood Program for civil defence, (b) Biological Warfare defence services, (c) Emergency Hospital Supplies.

Working parties previously organized were recalled during the year to consider other casualty services problems such as mobilization of first aid services, the surgical aspects of first aid and emergency hospital treatment.

In the field of A.B.C. warfare, Canadian physicians selected by provincial civil defence health services authorities attended courses at Camp Borden and a special course in this field was conducted in the French language in Montreal, as a result of which between 60 and 70 French-speaking physicians received instruction. In addition, with the assistance of the Civil Defence Nursing Advisory Committee, some 1,340 nurse instructors in Canada had, by the end of the year under review, received training in the nursing aspects of A.B.C. Warfare. In turn, through the services of these nurse instructors, more than 20,000 graduate nurses received special civil defence nursing training. Steps were taken, also, towards the training for civil defence of student nurses, nursing assistants and home nursing volunteers.

The development of the overall civil defence health program was further facilitated by the holding of two series of civil defence health services regional conferences, the first in May, 1952 and the second in late January and early February, 1953. At each of these series of conferences the Western provinces, the Ontario-Quebec region and the Atlantic provinces, respectively, were given opportunities to send representatives to round table discussions of development problems.

Preliminary arrangements were concluded for the establishment in each province of civil defence Blood Services program facilities, including the establishment, in collaboration with existing peacetime transfusion services, of such emergency bleeding centres as were deemed requisite.

In addition to other health services literature compiled, published and distributed during the year, civil defence sponsored the production, under the auspices of the Canadian Medical Association, of a special civil defence issue of the *Canadian Medical Association Journal*. This issue contained authoritative information for professional use, written by recognized authorities in Canada in the fields of civil defence casualty services. The issue was published in both French and English and was distributed not only to all physicians in Canada, but also to all nurse instructors and to all nurses, dentists and pharmacists actually engaged in the civil defence health services program.

Programmed activity was continued towards the procurement, for stock-piling, of essential medical supplies for civil defence with a view to keeping pace with civil defence health services organization and training throughout Canada. Orders were placed to the value of \$1,749,000 of which deliveries could be obtained on only \$74,000 worth by the end of the fiscal year.

## **Welfare Planning**

During the past year the Civil Defence Welfare Planning Group was most active and did much to encourage and assist local organization and planning.

Seven general civil defence welfare courses were conducted for personnel responsible for the organization and operation of this side of civil defence. In all, a total of 197 candidates attended these intensive one-week courses in Ottawa.

Several important conferences took place during the year, including a five-day conference for the directors of municipal civil defence welfare services and two conferences on Emergency Feeding. Mainly as a result of these conferences most of the larger cities of Canada have now appointed trained personnel to act as chiefs of Emergency Feeding. A series of conferences was also held to study the subject of Emergency Clothing and on the basis of these discussions a technical manual covering Emergency Clothing in Civil Defence will be prepared.

Numerous other meetings were held of committees dealing with specific aspects of welfare services.

Special assistance was given to local training courses in British Columbia, Manitoba, Ontario and Quebec, and throughout the year all provinces from Nova Scotia to British Columbia were visited and given encouragement and guidance in the establishment of provincial and local organization of Civil Defence Welfare Services.

Continuous liaison was maintained through the year with both United States and United Kingdom officials responsible for civil defence welfare services in their respective countries. Highlights of the liaison program were visits made to this country by Miss Edith Walker, Chief of Emergency Feeding for the British Ministry of Food, by Mr. Barent Landstreet of the Federal Civil Defense Administration, Washington, and by Mr. Alden Bevier, Director of Civil Defense Welfare Services for New York State.

Practical disaster experience was gained in the Missouri flood area by the welfare administrative officer through the joint co-operation of the American Federal Civil Defense Administration and the American Red Cross.

A number of pamphlets, brochures, leaflets, charts and advisory bulletins were prepared and sent to the provinces for distribution to those concerned in all municipalities. A technical manual on Emergency Feeding and a pamphlet on Registration and Information in Civil Defence Welfare Services were two important guide manuals produced.

## Warning and Communications

*Warning System*—A Civil Defence Warning System was established to enable dissemination of warnings from Air Defence Control Centres to civil defence key points in target areas, including certain links between the United States and Canadian civil defence key points for co-ordination of warnings. Operating procedures were prepared and the system is under regular and constant test. Drills and practices are continuously being performed to keep key point operators familiar with the system and its operation. Investigation of means to back up the above warning system by alternative channels of communication was undertaken. Arrangements were made to use some existing communication media for onward dissemination of warnings from main key points if civil defence services should fail. Liaison with Canadian and U.S. civil defence, military and air defence groups was undertaken on a continuing basis.

*Sirens*—Investigations and studies were made with respect to the installation of 200 sirens furnished to 24 cities, and sound coverage data was procured with respect to locations where sirens have been installed. Methods of siren control were investigated. Various sirens were subjected to tests in collaboration with the National Research Council and Defence Production Board. Additional specifications and requisitions were prepared as a result of further studies and indicated expansion requirements.

*Communications*—Investigations were conducted with respect to modification of surplus radio sets to determine their usefulness in civil defence. Studies were made of civil defence communication requirements as they concerned the various services. In collaboration with the Department of Transport a "Guide for Establishment of a Civil Defence Radio Service" and "Procedures—Civil Defence Communications Service" dealing with the operation of wire and wireless services likely to be engaged in civil defence, were prepared. A further manual "Civil Defence Communications" has been drafted and is nearing its final stage of preparation. Specifications were developed

leading to the procurement of a number of hand-portable telephone sets to be used for training purposes. Likewise, a number of sound-powered field telephones were selected for procurement.

*Broadcasting*—Extensive work and study has been undertaken with regard to a possible use of radio broadcasting services in civil defence. The study is continuing under a plan of collaboration with United States and Canadian military authorities, as well as with the U.S. Federal Civil Defense Administration and with authorities responsible for the control of such services, namely, Canada's Department of Transport and the U.S. Federal Communications Commission.

## **Transportation**

During the first nine months of the 1952-53 fiscal year the Federal Civil Defence Advisory Transportation Committee held one meeting. They strongly recommended the appointment, at federal level, of a Transport Officer. This appointment was filled early in January.

Transportation committees in most provinces have now been formed under federal guidance and several target cities have followed the federal and provincial pattern as well.

A first draft of a "Transportation Guide," with sections headed: General; Motor transport; Water transport and small Craft Operation Plan was prepared, and distributed to all Provincial Transportation Committees. The Transport Officer has also visited the provinces and met each of these Committees.

The Federal Civil Defence Advisory Transportation Committee recommended working sub-committees on rail, sea, air, and motor transport, and these are in the process of being formed.

## **Information Services**

New media were employed this year in an accelerated program aimed at informing Canadians of their roles in civil defence and of approved measures for dealing with disaster. Special displays, press features and radio programs, were devised by the department's Information Services Division and advantage was taken of every opportunity to give fullest publicity to all developments related to preparedness.

The press was kept informed of application of federal funds provided for new civil defence measures, the approval of provincial projects being the occasion for joint press releases by federal and provincial civil defence authorities.

Late in the year, the United States Federal Civil Defense Administration offered Canada extended loan, for informational purposes, of one of three sets of displays comprising a giant "Alert America" travelling exhibition. The offer was accepted gratefully and a convoy of tractor-trailers containing these valuable exhibits was routed to Eastern Canada under charge of the Valley Forge Foundation, co-sponsor of "Alert America", with United States army personnel driving the vehicles from New York City to Ottawa. Plans are in hand for making use of this material.

Further evidence of international co-operation was provided by interchanges of visits by senior civil defence officials of the United States, Canada, the United Kingdom, and Sweden, and full informational advantage was taken of such occasions.

Other federal activities included the continued production, for use by provincial authorities, of informational materials and training manuals. "Give-away" leaflets were produced in quantity and Information Services continued to issue monthly editions of the "Civil Defence Bulletin".

The press associations, special writers and individual newspapers gave valuable support to civil defence by publicizing projects and plans as well as by covering extensively the exercises and demonstrations staged in widely-separated parts of Canada.

Co-operation was secured of both English and French language weekly newspaper associations in connection with publication in 1953 of a series of 10 special illustrated articles under the general heading "Canada Prepares to Deal with Disaster". It is expected that these will be widely used throughout the country and will be particularly valuable in explaining the role of rural people.

A novel journalistic venture was publication of a special "Disaster" issue of a four-page tabloid newspaper and its distribution by newsboys at "Operation Yourtown", held in connection with the annual meeting in Calgary of the Canadian Federation of Mayors and Municipalities.

Radio stations across Canada again gave generous airtime to civil defence news and covered special events. Several radio talks and round-table discussions were arranged. The Information Services' "Here's Health" radio series, used on 75 English and 29 French-language stations regularly, carried playlets on "Preparing for Atomic Attack", "Bombed Out", "Emergency Feeding in Disaster", "Panic", "Civil Defence in Schools", and "When Disaster Strikes".

An excellent training film entitled "Rescue Party" was made for Civil Defence by the National Film Board and is being used on all NFB circuits. Three newsclips have been made, to tie in with newsreels in commercial theatres, and a number of filmstrips have been completed.

A thirty-foot display on civil defence welfare was built for the Canadian Restaurant Convention in Toronto and for exhibition at Windsor, Ontario, and other points. In addition, two full-scale models of outdoor ovens were made for display and teaching purposes.

Approximately 40 panel displays have been provided to the provinces, all carrying basic civil defence messages. Large painted canvas floor-maps have been made for Ottawa, Calgary, Victoria, Vancouver, Montreal, Windsor, Halifax, St. John's, Regina, Quebec, and Toronto for training purposes in those cities.

Two three-panel displays were designed and wall and bulletin-board signs are being made for federal and other government buildings, covering fire as well as air raid instructions.

Other projects under way include: production of a "Speaker's Kit", containing background information for public speakers, instructors, etc.; Civil Defence Information folders, wallet cards, a series of lecture slides, lapel badges, armbands, car windshield stickers, certificates, and enrolment cards.

### **Co-operation with Other Countries**

*United States*—As a result of the Canada-United States Civil Defence Agreement signed in 1951, co-operation between these two countries progressed appreciably during the past year. Planning for mutual aid and mobile support between adjacent states and provinces showed considerable progress and exercises were conducted at various border points to test preparations for dealing with disaster.

Working Groups of the Joint Committee on Civil Defence, established in 1951, held meetings in Ottawa, New York, and Washington and two meetings, held in Washington, of the Executive Secretariat reviewed the progress of the committee's Working Groups.

Washington State and British Columbia were among the first local groups to agree on a mutual operation plan, including a uniform warning system. They also developed and tested a civil defence network of amateur radio stations to be extended to Alberta, Oregon, Montana, and Idaho.

In June 1952, civil defence officials of Minnesota, North Dakota, and Manitoba met in International Falls, Minn., to make plans for mutual aid in case of attack.

A similar conference took place in Montreal to arrange for co-operation between New York, New Hampshire, Maine, Vermont, New Brunswick, Quebec, and Ontario. Another conference held in Boston for further discussion of these plans, was attended by representatives of these States and Provinces, Michigan, New Jersey, and other New England States.

Test exercises were held at Niagara Falls and Buffalo, involving United States and Canadian ambulances and fire-fighting equipment.

A notable example of United States-Canadian co-operation was the "Niagara Agreement", which went into effect in July 1952. It was the first international agreement among newspaper and radio station owners and civil defence authorities to pool information media between the two nations on a regional basis in case of attack.

*United Kingdom*—As with the United States, close relationships have been maintained with the Civil Defence authorities in the United Kingdom. The Federal Co-ordinator and senior members of his staff, as well as key provincial officials, have attended courses in Britain.

The Federal Co-ordinator visited and inspected civil defence installations in the United Kingdom, and Canada, in turn, played host to a number of U.K. Civil Defence officials, including the Director General of Civil Defence Training, who visited this country on two occasions; the Minister of Health in the British wartime cabinet, and the Director of Emergency Meals Services in the British Ministry of Food.

*NATO*—During the past year, the Federal Civil Defence Co-ordinator attended the initial NATO meeting in the field of Civil Defence. As a result, arrangements were made for the exchange of public information materials and reports on Civil Defence programs among the NATO members.

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## ADMINISTRATIVE SERVICES

As Administrative Divisions serve the entire Department both across Canada and overseas, the further development of departmental activities in many fields during the past year continued to make increasing demands upon them. These Divisions are—

### Departmental Secretary's Division

The activities of the Departmental Secretary's Division continued to fall into two broad classes—those which the Departmental Secretary carried out personally and those which were carried out largely by the staff of the Division.

Included among the first group of activities were (a) acting as financial adviser to the Department in respect of many aspects of its work; (b) assisting the Minister and the Deputy Ministers in the long and complicated procedure related to the preparation and approval of the departmental estimates from the time they were first drafted until they were approved by Parliament; (c) acting as the Deputy Ministers' substitute with respect to the approval of accounts payable, travel claims, requests for encumbrances, requests for transfers between allotments, submissions to Council and to Treasury Board, and other financial documents; (d) preparing material for tabling in Parliament; and (e) carrying out many special projects which were assigned from time to time.

The second group of responsibilities were borne by the various Sections of the Division as follows:

The Registry Services carried out all phases of the work relating to the custody and circulation of the Department's official records. This involved the operation of a central registry and eight sub-registries in Ottawa, and the provision of advice, assistance and a certain degree of supervision in respect of records in many departmental establishments across Canada. Good progress was made during the year on the complete reorganization and standardization of the filing system and relating procedures for the entire Food and Drug Divisions across Canada. New or completely revised file series were also created for a number of other Divisions. Mail, messenger and truck services at Head Office continued to be provided by this Section.

The Accounts and Estimates Section continued to assist in providing financial advisory assistance to the Department and relieving Directors and Chiefs of the burden of maintaining accounting records and of routine administrative duties related to financial matters. This Section also carried out much of the detail involved in the preparation of departmental estimates and continued to act as liaison between the Department and the Treasury Office serving it.

The work of the Correspondence Section consisted largely of preparing replies to the many thousands of letters and enquiries which were received on a wide range of health and welfare subjects.

The most interesting development of the year in the Duplicating Section was the reproduction of increasing quantities of departmental booklets, leaflets, and forms. Over 15,000,000 duplicating impressions were produced, representing a 25 per cent increase over the previous year, and the many related operations increased accordingly. Approximately 30,000 names were added to the addressograph mailing lists maintained by this Section.

The Secretarial Services again provided a central source of stenographic and typing assistance to the entire Department in Ottawa. As well, all typing and mat work required in preparing material for reproduction in the Duplicating Section was done by the Secretarial Services. Varsity facilities were also available.

In addition, the Departmental Secretary's Office continued to act as an information centre for the entire Department and to carry out the wide range of duties which normally fall to the lot of the secretariat of a large organization.

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## Information Services Division

### Health Education

It is a statutory responsibility of this Department to collect, publish and distribute information on health and welfare, and to work with the provincial authorities for the health and well-being of the Canadian people. To help discharge this responsibility, and to support the public relations and training programs of civil defence, the Information Services Division originates, or assists in the preparation of, most of the books, pamphlets, displays, posters, films, filmstrips, radio programs and other materials produced by the Department for this purpose.

The Division has a double duty: to report to the public on new and interesting developments in the Department's work, and to prepare educational materials to further Canada's health, welfare and civil defence programs.

The notable event of this fiscal year was the convening for three days in October, 1952, of the fourth Health Education Conference. This brought together with officers of the Division health educators from all the provincial health departments. Miss Nell McKeever, Assistant Chief, Division of Public Health Education, U.S. Federal Security Agency, attended and advised the Conference on health education practices in the United States. Problems connected with the planning, production and distribution of health education materials in Canada were thoroughly reviewed. Special study was made of economies that might be effected without detriment to the invaluable part that health education plays in raising public health levels. The Conference included a joint session with the Dominion Council of Health at which its discussions were reviewed and policy questions settled.

### Press and Radio

Factual material on new developments under the National Health Program, civil defence, and other programs administered by the Department was furnished regularly to the daily, weekly and periodical press; to radio stations; and to interested groups or individuals. Basic information was supplied for a number of articles on the Department's work, and a dozen other articles were written in the Division on request.

National Health Radio Notes were supplied each week to Canadian radio stations using them; Canada's Health Column and health cartoons were distributed widely to weekly newspapers; and Press Fillers on health and welfare subjects were issued to daily and weekly newspapers requesting them.

The Division's weekly radio series, "Here's Health", consisting of professionally-produced programs with an important health, welfare or civil defence message in a 10-minute dramatic program, continued to be widely used as a public service by private radio stations. At the year's end, 75 English and 29 French language stations were broadcasting this series regularly.

To maintain close liaison with the weekly press, officers of the Division attended the annual meetings of both the English and French language weeklies. All materials prepared by the Division were written both in English and French.

## Publications

As an economy measure the Division reduced to ten issues its periodical "Canada's Health and Welfare", which serves as an information clearing-house for health and welfare officers on the three levels of government, for members of voluntary agencies in these fields, and for others particularly interested. Two colored supplements were included during the year: "World Health Organization" and "Public Health Research in Canada".

Other monthly publications, produced in cooperation with the Divisions concerned, were: "The Occupational Health Bulletin", "Canadian Nutrition Notes" and "The Civil Defence Bulletin". Two issues of "The Occupational Health Review", a technical manual for professional personnel, were produced.

The Division sent out five issues of "For Your Information", a newsletter for health educators; and assisted in the preparation of "Food and Drug News", a quarterly for the guidance of staff members of these divisions; "Indian Health Newsletter", to be sent every few months to personnel in Indian Health Services; and "The Pesticide Bulletin", a new publication of the Occupational Health Division.

The revision of the well-known manual, "The Canadian Mother and Child", was completed during the year and the book readied for printing. To ensure that this would be in all respects as authoritative as its predecessors, of which four million copies have been circulated over one-third of a century, the book was reviewed and approved in draft form by the appropriate medical specialists in all parts of Canada.

A new booklet, "Eye Care", published during the year, combined the material of three older Blindness Control pamphlets. Three million bilingual cheque inserts were prepared to remind recipients of details of Family Allowances and Old Age Security regulations. Three new subjects: "Shyness", "Preparing Your Child for Hospital" and "Discipline" were added to the popular Child Training pamphlets series. Other new publications included: "Manual Artificial Respiration" and "Teenager's Toothtest". Two leaflets, "Safe to Take" and "The Truth About Labels" were printed for the Food and Drug Divisions. Pamphlets on "Clean Eating Places" and "Domestic Sewage Disposal", were prepared for the Public Health Engineering Division and sent for printing.

Among items revised and reprinted during the year were: the leaflet "Preparing Your Child for School"; "Dental Health Manual"; and "Emergency Feeding in Civil Defence". Also readied for printing were a manual on "Weaving"; a leaflet, "Dating the Dentist"; "Children's Health Chart"; and a revised edition of the booklet "What You Should Know About Nursing".

A new series of informative pamphlets was begun on specific health subjects. Written, evaluated by the provincial authorities and prepared for printing were "Immunization"; "Diabetes"; "Home, Safe Home"; and "Rest at Camp." An important handbook for nurses on "Prematurity" was prepared by the Child and Maternal Health Division and sent to the provinces for evaluation. A calendar for Indians was produced, illustrated by a painting by an Indian artist.

New civil defence manuals published included: "Registration and Information in Civil Defence Welfare Services"; "Welfare Services and Emergency

Lodging in Civil Defence," and "Hospital Master Plan for Civil Defence." "Glossary of Civil Defence Terms" was revised and re-issued; and three pamphlets were printed in quantity: "How to Build a Shelter"; "What About the A-Bomb"; and "What is Civil Defence?"

Through the co-operation of the Canadian Medical Association, its Journal published a special authoritative issue consisting of articles on the medical aspects of civil defence written by leading Canadian authorities. Among civil defence publications readied for printing were these training manuals: "Auxiliary Police Service"; "Damage Control"; "Communications"; and "Technical Manual on Emergency Feeding." Other subjects in production included: "Artificial Respiration—the Holger-Neilsen Method"; "Welfare Services in Civil Defence" and "Emergency First Aid" pamphlet and manual.

## Civil Defence

The Division continued to give special attention to the development of its informational program for civil defence. Apart from the publications listed above and the program as set out in more detail in the chapter on Civil Defence, this included the production during the year of large-scale canvas floor maps for eleven cities; seven radio programs; one training film and three theatrical newsclips; four filmstrips; fifty eight-panel displays and a display on emergency welfare services. In addition, there were many minor projects, including news releases, picture stories, and the preparation of a lapel badge, kit for speakers, wallet cards, lecture slides, platform lecture charts, etc. An active display program was maintained in this field. A domestic air-raid shelter display was widely shown across Canada; "Operation Yourtown," a detailed exposition of the A-bombing of a city, was staged at Ottawa, Calgary and Quebec City. A casualty first aid playlet was shown in several cities by the Civil Defence Health Planning Group. Forty eight-panel displays were distributed to the provinces.

Press, radio, newsreel and photo coverage was arranged for a number of civil defence activities, in particular for the movement from Niagara Falls, N.Y., to Ottawa of the huge "Alert America" convoy and display which was sent on loan to Canada for coast-to-coast showing here. A series of ten articles was prepared, in co-operation with national associations for use in English and French language weeklies. During the year, an integrated publicity program, including basic designs and slogans for posters, signs, etc., was prepared for later use.

## Exhibits

Besides the active display program for civil defence, the Division arranged exhibits, and usually sent representatives to man them, for annual meetings of the International Dental Congress in London; Canadian Dental Association; Canadian Public Health Association; American Public Health Association; National Conference on Social Work, Chicago; and Canadian Conference on Social Work, Quebec City. An exhibit was placed in the Central Canada Exhibition. Three inexpensive displays on child health care were produced and sample sets distributed to the provinces.

## Posters

New posters included "Did You Wash Your Hands" and "The W.H.O. Preamble." "Canada's Food Rules" was the subject of a poster for the Nutrition Division.

## Films and Filmstrips

Three new films were produced during the year: "Rescue Party," the first civil defence training film; "Food for Freddy," for the Nutrition Division; and "Shyness," for the Mental Health Division. The latter film won the Canadian Film Awards accolade as the best film of the year produced for a government department, adding another to the honours won by the Department's mental health films. The next film in this Division's "Ages and Stages" series, "Sixes to Nines," was almost completed. Film treatments were prepared for civil defence films on welfare services and on civil defence generally.

Four filmstrips were produced for Civil Defence: "Rescue" (2 parts); "Organization"; "Basic Fire-Fighting"; "The Debris Problem." A filmstrip on "Discipline" was made to accompany the Child Training folder. Seven UNESCO filmstrips made by Chinese artists and dealing with basic health problems were adapted for use by Indian Health Services. Other Indian Health filmstrips included "Safe Water" and "How to Feed Your Baby," both almost completed, and one on T.B. posters drawn by Indian children. A filmstrip was begun on Hydatid Disease.

A short film and three filmstrips on "Weaving" were produced for the Physical Fitness Division. A filmstrip, "Arthritis, The Story of Mrs. Young," was made to increase public understanding of this widespread health problem.

During the year, films were previewed and added to the Department's National Health, Medical and Biological, Welfare, and Physical Fitness film libraries. A number of the Department's films appeared on United States television.

## Biological Photography

In serving the needs of the Department, the Biological Photographic Section did extensive work on civil defence training and publicity projects; it carried out a large-scale printing of photographic manuals on a survey of cheese factories, and produced a great variety of slides and photo series for lecture and publicity use.

## Miscellaneous

Particular study was made during the year of possible economies in the production and distribution of this Division's health and welfare educational materials. Attempts were made to develop sales to the public of selected publications, but their limited success indicated that this distribution channel still fell far short of insuring the minimum distribution of federal health and welfare materials recommended by the provinces. At the year's end, three publications were being withheld from circulation while the best method of distributing them was being further explored.

Apart from the publications listed, this Division also assisted in the preparation for duplication of a number of items prepared by other Divisions. The officers of the Division answered many inquiries, arranged publicity for the visit to Canada of the first health mission from India and Pakistan and arranged conducted tours through the Department for a number of other visiting students, writers and health and welfare specialists interested in learning the nature and scope of the Department's work.

## Legal Division

During the past year the Legal Division provided legal services such as are ordinarily performed by the legal officers to a large corporation. This involved the furnishing of opinions, the preparation of contracts and agreements and other legal documents, and advising on and assisting in prosecutions and other litigation in which the Department was concerned. Included in the last more particularly were prosecutions under the Food and Drugs Act, the Opium and Narcotic Drug Act and the Family Allowances Act.

The Division was also concerned with the revision and consolidation of regulations, the drafting and revision of legislation for submission to the Department of Justice, and the preparation of numerous submissions and recommendations to the Governor in Council and the Treasury Board.

The Division's legal officers represented the Department on various boards and on intradepartmental committees concerned with administrative and policy matters of all kinds affecting the Department.

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## Departmental Library

The Departmental Library continued with the selection, acquisition and organization of reference and technical books, serial publications, pamphlets and government documents pertaining to the work of the Department in Ottawa and in regional establishments.

Among the publications the Library processes are comparatively large stocks of publications intended for distribution, and special arrangements were devised during the year to effect reductions in price. Co-operation with the Penitentiaries Commission program of vocational rehabilitation resulted in a substantial reduction in the cost of bookbinding for all departmental establishments in Canada.

Catalogue card records by author, subject, title and series of all reference publications owned by the Department are centralized in the Main Library and copies are supplied to other establishments where applicable. Copies of author or title cards are also supplied to the National Library for their Union Catalogue of Libraries in Canada.

Annotated bibliographies of published materials on social welfare in Canada, for the periods July-December 1951 and January-June 1952, were prepared for the United Nations Social Welfare Information Series.

While most of the work of the Departmental Library is associated with the activities of departmental personnel, there are also numerous requests from other libraries. In addition, the Library staff answered inquiries from other centres and other countries on library organization and related bibliographical matters.

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## Personnel Division

This Division continued to conduct the personnel business of the Department with the Civil Service Commission, the Treasury Board staff, the Comptroller of the Treasury and other government agencies. It was responsible for

advising on changes of organization within the Department, for representing the Department in negotiations concerning staff appointments and for doing the work required within the Department in connection with promotions, transfers, pay, superannuation, leave, attendance and personnel records.

At the close of the year there were 3,428 employees in the Department of whom 1,077 were permanent and 2,351 temporary, an increase of 96 permanent and 111 temporary civil servants during the year. Greater and improved facilities in the Indian Health Services accounted for 137 of this number and added responsibilities in the Immigration Medical Service, the Food and Drug Divisions and the Old Age Security offices accounted for a large part of the remainder of the increase.

While the number of permanent civil servants increased by only 111, the Department had requests for the creation of approximately 325 additional permanent positions before either the Civil Service Commission or the Treasury Board on March 31, 1953.

The turnover of staff for the year amounted to 951 or approximately 28% which is the same as during the previous year. Of this total 485 were in the Indian Health Services and 466 in the remainder of the Department. This was a 38 per cent turnover in the Indian Health Services and a 21 per cent turnover elsewhere.

Only 832 of the staff of the Department were employed at Ottawa—441 in the Health Branch, 278 in the Administration Branch, 38 in the Welfare Branch and 75 in the Civil Defence Division. The remainder were located in other parts of Canada and overseas, as follows:

	Welfare Branch	Health Branch other than Indian Health Services	Indian Health Services	Total
Northwest Territories .....	...	...	22	22
British Columbia .....	65	61	411	537
Alberta .....	55	5	314	374
Saskatchewan .....	57	3	108	168
Manitoba .....	50	20	82	152
Ontario (including Ottawa) ....	226	29	276	531
Quebec .....	216	184	26	426
New Brunswick .....	47	20	5	72
Nova Scotia .....	52	77	12	141
Prince Edward Island .....	10	1	1	12
Newfoundland .....	33	9	...	42
Overseas .....	...	119	...	119

During the past year changes were made in the organization of the Health Services Directorate and minor changes were made in the Old Age Security establishments.

Considerable time was spent on efforts to secure competent professional and scientific personnel. Although the number available in Canada was greater, the remuneration being offered outside the Government service continued to make it very difficult to secure and retain qualified staff in these classes.

## Purchasing and Supply Division

The Purchasing and Supply Division again met the supply problems of the Department. Its added responsibilities are reflected in the general expansion reported by other Divisions of the Department.

A new hospital was opened by the Indian Health Services at Norway House, Manitoba, and the Civil Defence Division also expanded its activities. Both of these necessitated the installation of equipment and establishment of supply facilities.

Approximately 12,000 requisitions were processed involving 18,000 orders to suppliers throughout the country and to other federal Departments.

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## Research Division

The Research Division is responsible for the analysis and evaluation of basic information dealing with socio-economic aspects of health, welfare and social security, special emphasis being placed on questions of methodology, underlying principles, costs, financing, administrative methods, procedures and reporting. Its analytical studies form the basis of departmental planning in many spheres. The Division is the research arm of the various Divisions and Directorates of the Department in the planning and conduct of a wide variety of research. In addition, the Division co-operates with other government agencies in carrying out surveys and studies.

One of the major projects undertaken by the Division in the past fiscal year involves the preparation of a report on health services and resources in Canada based to a large extent upon the provincial health survey reports. Over seventy volumes have been submitted by the provinces covering many phases of health activities during the base period of 1948; the Research Division has undertaken the preparation of summaries by topic bringing the material up-to-date wherever possible and incorporating information from the divisional data on health legislation, services and resources in Canada. It is anticipated that a national report covering one or two volumes will be completed. In the conduct of this study, close liaison is being maintained with the authorities concerned in government and voluntary organizations. The Division has also prepared summaries of the recommendation made by provincial health survey committees in their survey reports.

The Division participated with the Epidemiology Division, the Directorate of Health Insurance Studies, the Dominion Bureau of Statistics and the provinces in the conduct of the Canadian Sickness Survey. A code for existing prepaid health and sickness insurance plans was devised. Preliminary special compilations of survey data concerning national expenditures for health services, were assessed in the light of other health expenditure estimates.

The Division was also associated with the Epidemiology Division in the planning and organization of a health study for the International Joint Commission Air Pollution Investigation in the Detroit-Windsor area. The Supervisor of the Methods and Analysis Section collaborated with the Chief of the Epidemiology Division in preparing a paper, "Some Considerations in Planning a Comprehensive Study to Determine the Effects of Air Pollution on Health (A Review of Methodology)" which was presented to the American Association for the Advancement of Science at St. Louis, December, 1952.

Research services were provided to the Dental Health Division with respect to several important projects. A bulletin, "A Suggested Methodology for

Fluoridation Surveys in Canada," was published jointly by the Research and Dental Health Divisions. An analysis of data arising out of a study of the use of the P.M.A. Index, a new index of gingivitis, was carried out and a survey plan and procedures were drawn up for the Dental Health Division study of the relative efficacy of stannous fluoride and sodium fluoride in dental caries control by topical application.

Assistance was given to the Child and Maternal Health Division in connection with an investigation of staphylococcal infections among mothers and infants in Winnipeg hospitals. Consultative services were provided to the Civil Defence Health Planning Group, the Civil Aviation Medicine Division, and the Food and Drug Divisions respecting the establishment and maintenance of records and statistics related to their work. The Division continued its service of providing morbidity, mortality and related data in answer to specific enquiries received by the Department and in response to requests for material and analyses from other Divisions and officers within the Department.

A survey of psychiatric services in general hospitals, carried out in collaboration with the Mental Health Division, was completed and a report prepared for publication. The supply of hospital bed facilities in Canada was reviewed and a listing of various types of clinics prepared for departmental use and for the Directory of Hospitals published by the Bureau of Statistics. Assistance was rendered to the Directorate of Indian Health Services in the preparation of a new type of annual report and compilation of data respecting hospitalization of Indians and Eskimos.

Social security developments in Great Britain, the United States, Australia, New Zealand, Sweden, The Netherlands, Denmark and France and several other countries were kept under review. Information concerning the financial, administrative, and benefit provisions of particular programs in other countries and under various Canadian schemes was made available to senior officials of the Department. Bulletin No. 14 in the Division's Social Security Series, "Expenditures and Related Data for Government Health and Social Welfare Programs in Canada for Year ended March 31, 1951," and a further study on social security expenditures in five selected countries now in preparation are illustrations of some of the types of projects carried out in this field.

The Director of the Division acted as a technical government adviser at the 5th Inter-American Conference of States Members of the International Labour Organization and the 35th Session of the International Labour Conference. The Division was represented also on the Inter-Departmental Committee on Annuities, set up to review the government's annuities program.

Studies on the different aspects of prepaid medical and hospital care were carried on in co-operation with the Directorate of Health Insurance Studies. These included projects such as the development of national and per capita cost estimates for different types of health services, the preparation of memoranda on various public and private hospital care programs in Canada and abroad, and information concerning the pattern of purchase of health care services by families in Canada. Information derived from these sources was made available to assist in planning National Health Grants for radiological and laboratory services and child and maternal health, and to aid other Departments in planning programs and policies.

Another in a series of bulletins on health insurance programs in other countries, "Health Insurance in the United Kingdom, 1911-1948", was published. A study of the provisions under voluntary medical and hospital insurance schemes in Canada and a report covering special health care programs for public assistance recipients were under preparation. Assistance related to private health and pension plans was given to the Department of Labour for their annual Survey of Wages and Working Conditions.

The Division continued the study of the development of health and welfare services and legislation in Canada, with some attention to programs in other countries. Work, for example, was begun on a comprehensive review of community, family and child welfare in Canada with special reference to types of services including social aid, their legislative and financial bases, and jurisdictional areas and relationships. A revision of the bulletin, "Mothers' Allowances Legislation in Canada", first published in 1949, is being completed for publication and a compendium of child welfare legislation is in the course of preparation. Services for special groups, such as the care of the aged, are under continuing review. The Director of the Division served as a member of committees on problems of the aged set up by the Canadian Welfare Council, the American Public Welfare Association and the American Public Health Association.

The Division also continued its work of building up reference material on programs for the rehabilitation of the disabled in Canada and other countries with special reference to health and welfare services and participated in departmental planning in connection with the development of the Medical Rehabilitation Grant. A classification and code of permanent disabilities were drafted for use in a supplementary study on permanent disabilities. The Division also provided research services for the National Advisory Committee on Rehabilitation.

As a part of its responsibility for the maintenance of information and provision of analyses of the manpower situation with regard to health and welfare personnel, the Division provided research assistance to the Defence Medical and Dental Services Advisory Board, and the National Advisory Committee on Manpower. The register of physicians was continued and memoranda were issued on the general situation with regard to doctors, dentists, nurses and social workers. At the request of the Civil Defence Health Planning Group, the Division assumed major responsibility for planning an Inventory of Nursing Resources in Manitoba and at the request of the Canadian Nurses' Association, the Division carried out an activity analysis study of the head nurse in a large hospital.

At the request of the National Conference on Personnel in Social Work a Survey of Welfare Positions was conducted to determine the demand for social workers in Canada. The survey was planned as a guide to social agencies and schools of social work in assessing staff requirements and training and covered full-time paid employees in welfare positions as well as vacancies and new positions to be set up, and showing also the preferences for qualified social work staff. Progress reports were presented at the Canadian Conference on Social Work and to the Personnel Committee of the Canadian Welfare Council. The final report will be published in a series of bulletins commencing in the Fall of 1953.

Sections of the Canada Year Book and other official publications dealing with health, welfare and social security were prepared by the Division. A report on foreign developments in these fields was provided for each issue of the departmental publication "Canada's Health and Welfare". Reports and memoranda on Canadian health and welfare legislation and programs were prepared at the request of the United Nations Department of Social Affairs, the World Health Organization and the International Labour Office. Assistance was provided to private organizations and individuals concerning various research projects and publications related to the work of the Department. Aid was also given to health and welfare personnel from abroad who came to Canada to study social legislation.

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TABLE 1

(Civil Service Health Division)

## HEALTH UNIT STATISTICS—BY MONTHS

FISCAL YEAR 1952-1953

	Total	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March
Number of personnel under supervision.....		20,292	20,284	20,550	20,392	20,893	21,133	21,159	21,297	21,403	21,875	21,833	21,631
Number of Health Units in operation.....		17	17	17	17	17	17	17	17	17	17	17	17
Number of Visits—													
Total.....	177,413	14,423	16,501	13,893	13,518	11,983	15,639	15,838	13,648	15,495	15,826	14,263	16,386
First visit.....	131,888	10,652	12,250	10,192	10,103	8,840	11,920	11,920	10,072	11,628	11,713	10,466	12,152
Repeat visit.....	45,525	3,771	4,271	3,701	3,415	3,143	3,719	3,918	3,576	3,867	4,113	3,797	4,234
Visits by sex—													
Total.....	177,413	14,423	16,501	13,893	13,518	11,983	15,639	15,838	13,648	15,495	15,826	14,263	16,386
Males.....	80,948	6,471	7,249	6,232	6,167	5,344	7,141	7,433	6,206	7,138	7,352	6,570	7,615
Females.....	96,465	7,952	9,252	7,661	7,351	6,639	8,498	8,405	7,442	8,357	8,474	7,693	8,771
Nature of visits—													
Total.....	177,413	14,423	16,501	13,893	13,518	11,983	15,639	15,838	13,648	15,495	15,826	14,263	16,386
Illness.....	67,822	5,438	5,979	5,320	5,443	4,763	6,022	5,981	5,059	5,959	5,947	5,532	6,324
Accident.....	15,351	1,341	1,393	1,383	1,394	1,124	1,193	1,379	1,111	1,199	1,289	1,321	1,224
Consultations.....	19,317	1,671	2,020	1,720	1,480	1,250	1,528	1,650	1,466	1,412	1,741	1,630	1,731
Return-to-work visits.....	74,923	5,923	7,109	5,470	5,192	4,841	6,896	6,819	6,012	6,925	6,849	5,780	7,107
Classification of first visits—													
Total.....	131,888	10,652	12,250	10,192	10,103	8,840	11,920	11,920	10,072	11,628	11,713	10,466	12,152
Respiratory.....	37,288	3,046	2,914	1,657	980	1,341	3,069	3,996	2,639	4,195	4,253	3,366	4,970
Digestive.....	22,115	1,559	2,127	1,543	2,481	2,279	2,290	1,771	1,694	1,772	1,610	1,281	1,408
Skin and Cellular.....	8,359	656	667	942	1,085	702	703	651	611	606	541	592	603
Menstrual disorders.....	7,538	645	786	686	666	569	595	650	653	603	607	536	542
Emotional disorders.....	2,514	210	297	224	166	172	198	221	228	211	198	194	205
Contagious diseases.....	216	58	36	26	15	4	4	10	8	12	19	17	7
Accidents non-industrial.....	6,832	577	593	607	650	555	528	653	553	526	573	535	502
Accidents industrial.....	4,375	392	403	416	330	282	370	366	307	362	369	409	369
Ill-defined and all others.....	42,651	3,509	4,417	3,791	3,730	2,936	3,533	3,602	3,379	3,341	3,563	3,304	3,546
Disposal—													
Total.....	177,413	14,423	16,501	13,893	13,518	11,983	15,639	15,838	13,648	15,495	15,826	14,263	16,386
Sent home.....	4,191	322	352	287	277	259	369	315	380	383	365	418	564
Returned to work.....	173,222	14,101	16,149	13,606	13,241	11,724	15,270	15,523	13,368	15,112	15,461	13,845	15,822
Referrals—													
Total.....	9,678	821	863	777	743	606	662	879	800	820	985	838	884
Referred to Health Centre.....	2,460	200	200	225	212	141	151	206	202	183	263	221	239
Referred to family physician.....	7,218	621	638	556	526	465	511	673	598	637	722	617	645

Index of Participation—

Average monthly number of employee health unit visits per 100 personnel supervised... 68.

TABLE 2

(Civil Service Health Centre)

## HEALTH CENTRE STATISTICS

FISCAL YEAR 1952-53

## NUMBER OF VISITS

Total.....	6,481
First visit.....	2,794
Repeat visit.....	3,687

## VISITS BY SEX

Total.....	6,481
Male.....	4,378
Female.....	2,103

## PHYSICAL EXAMINATIONS

Total.....	3,128
Pre-employment, permanency, etc.....	1,233
Obligatory examination with immunization.....	507
Voluntary.....	817
Other.....	571

## OTHER SERVICES

Total.....	3,352
Accident industrial.....	37
Accident non-industrial.....	313
Immunization.....	1,200
Consultation, interview, etc.....	1,802

## DISPOSAL

Total.....	6,481
Returned to work.....	6,364
Sent home.....	117

REFERRED TO FAMILY PHYSICIAN..... 130

TOTAL LABORATORY PROCEDURES..... 4,252

## X-RAY

Total.....	4,920
Chest.....	1,674
Chest (Photo-roentgen unit).....	2,657
Other.....	589

TABLE 3

(Civil Service Health Division)

## RETIREMENTS FROM SERVICE—ACCORDING TO DISABILITY

FISCAL YEAR 1952-53

Male — 138

Female — 32

Total — 170

CAUSE OF DISABILITY	AGE GROUPS					Total
	Under 40	40-44	45-49	50-54	55-59	
Infective and Parasitic . . . . .	1	0	0	2	0	3
Neoplasm. . . . .	1	1	2	2	3	9
Allergic, endocrine system, metabolic and nutritional disease. . . . .	1	1	1	1	7	11
Blood and blood-forming organs. . . . .	0	0	0	0	1	1
Mental, psychoneurotic, and person- ality disorders . . . . .	3	2	1	8	15	29
Nervous system and sense organs. . . . .	1	1	0	3	12	17
Circulatory system. . . . .	0	2	5	20	33	60
Respiratory system. . . . .	0	0	0	2	2	4
Digestive system. . . . .	0	0	0	2	7	9
Genito-urinary system. . . . .	0	0	0	1	2	3
Pregnancy, childbirth and the puer- perium. . . . .	0	0	0	0	0	0
Skin and cellular tissue. . . . .	0	0	0	0	0	0
Bones and organs of movement. . . . .	1	0	0	3	8	12
Congenital malformations. . . . .	0	0	0	0	0	0
Symptoms, senility, and ill-defined conditions. . . . .	0	0	1	3	3	7
Accidents, poisonings and violence. . . . .	0	1	0	0	4	5
Total all causes. . . . .	8	8	10	47	97	170

TABLE 4

(Food and Drug Divisions)

## EXAMINATION OF DOMESTIC FOODS

FROM: APRIL 1ST, 1952 TO MARCH 31ST, 1953

	LABORATORIES						Adul- terated	Mis- branded	Other Infra- ctions	Totals
	Hali- fax	Mont- real	Ota- tawa	Toron- to	Winni- peg	Van- couver				
Alimentary Pastes.....	2			1	5		2	6		8
Baking Powder, Leavening Agents or Chemicals.....	5		2	43	4	2	19	5		56
Bakery Products—Cakes, Pastry, etc.....	41		12	27	14	2	4	69		96
Beverage and Beverage Concentrates.....	99	350	41	194	96	153	41	164		933
Bread, Flour and Cereals.....	94	118	124	10	85	84	21	216		515
Breakfast Foods.....	1		5	6	11			9		23
Confectionery.....	22	11	28	147	10	21	13	70		239
Dairy Products.....	146	1,373	192	421	117	135	1,168	78		2,384
Dessert Powders and Mixes.....	13		834	30	2			15		886
Eggs and Egg Products.....			2			1		1		3
Fish and Fish Products.....	208		18	6	12	71	20	27		315
Food Colours and Flavours.....	111	1	14	10	15	10	27	101		161
Foods, Oriental.....										
Fruits, Fresh.....	3		1	2						6
Fruits, Canned.....	21		8	5	2	6	3	7		42
Fruits, Dried.....	46	1		6	10	9	8	11		72
Fruits, Glazed or Candied.....			1	1	6	1		4		9
Gelatin.....			4	1				1		5
Honey and Honey Products.....	21		2	5	4	1	1	9		33
Jams and Jellies.....	10		34	2	89	5	3	11		140
Juice and Syrups.....	149	1	3		28	9	2	3		190
Lard and Shortening.....	3	131	53		15	1	2	4		203
Liquors, Distilled and Fermented.....	49		26	1		2	4	18	2	78
Meat and Meat Products.....	192	749	94	104	360	286	347	46		1,785
Nuts.....	12		3	11	3		2	12		29
Oils.....	18	1	2	8	1	19	1	10		49
Pickles.....	7					16	4	2		23
Preservatives.....	1					19	4	8		20
Salad Dressings, Sandwich Spreads and Other Condiments.....	12		7	34	8	32	17	27		93
Soup and Soup Mixes.....	2		9	16	4		2	14		31
Spices.....	60	3	22	36	5	107	38	42		233
Sugar and Substitutes.....	5	1	7				1	3		13
Sweeteners, Artificial.....						2		1		2
Syrups and Molasses.....	23	3	5	4	23	28	29	11		86
Vegetables, Canned.....	31	1	13	5	37	59	20	28		146
Vegetables, Dried.....	11	2	21	7	11	8	1	19		60
Vegetables, Fresh.....			6	1	3	3	1	5		13
Vinegar.....	22		10	3	2		3	9		37
Water.....	14		2	1	2	11		1		30
Miscellaneous.....	3		22	88	73	7	39	46	1	193
Grand Totals.....	1,457	2,746	1,627	1,236	1,057	1,117	*1,847	*1,115	*3	9,240

\* These totals are not included in the right hand column.

TABLE 5

(Food and Drug Divisions)

## EXAMINATION OF IMPORTED FOODS

FROM: APRIL 1ST, 1952 TO MARCH 31ST, 1953

	LABORATORIES						Adul- terated	Mis- branded	Other Infrac- tions	Total
	Hali- fax	Mont- real	Ota- tawa	Toron- to	Winni- peg	Van- couver				
Alimentary Pastes.....	0	0	0	0	0	1		1		2
Baking Powder, Leavening Agents or Chemicals.....	7	0	0	0	1	0		5		8
Bakery Products—Cakes, Pastry.....	4	5	0	15	2	6		16		32
Beverage and Beverage Concentrates.....	32	16	0	13	8	19	1	40		88
Bread, Flour and Cereals.....	10	9	15	6	1	8	2	12		49
Breakfast Foods.....	0	0	0	1	0	0		1		1
Confectionery.....	197	124	0	68	111	212	51	196		712
Dairy Products.....	31	70	0	107	6	93	50	91		307
Dessert Powders and Mixes.....	16	1	0	2	6	1		19		26
Eggs and Egg Products.....	0	0	0	0	0	0				
Fish and Fish Products.....	3	6	0	8	710	201	11	26		928
Food Colours and Flavours.....	5	1	0	8	7	12	3	14		33
Foods, Oriental.....	18	0	0	0	95	1		90		114
Fruits, Fresh.....	1	0	0	2	0	0		3		3
Fruits, Canned.....	10	0	0	1	0	11		3		22
Fruits, Dried.....	226	304	1	64	740	574	27	15		1,909
Fruits, Glazed or Candied.....	6	0	0	0	1	9		3		16
Gelatin.....	0	0	10	0	0	0	8			10
Honey and Honey Products.....	0	0	0	0	0	2				2
Jams and Jellies.....	52	1	0	0	0	54	8	7		107
Juice and Syrups.....	31	8	0	4	3	21	8	30		67
Lard and Shortening.....	0	0	0	0	0	0				
Liquors, Distilled and Fermented.....	3	0	0	0	0	0		1		3
Meat and Meat Products.....	93	30	0	6	19	92	8	8		240
Nuts.....	348	724	28	405	959	484	109	33		2,948
Oils.....	12	41	0	2	0	1		8		56
Pickles.....	2	0	0	0	1	4		1		7
Preservatives.....	2	0	0	1	0	0	1	3		3
Salad Dressing, Sandwich Spread and Other Condiments.....	9	4	0	5	91	8		73		117
Soup and Soup Mixes.....	1	0	1	2	1	0	1	3		5
Spices.....	44	171	3	10	7	30	2	36		265
Sugar and Substitutes.....	2	4	0	0	1	0		2		7
Sweeteners, Artificial.....	0	0	0	0	0	0				
Syrups and Molasses.....	256	157	0	3	1	4		7		421
Vegetables, Canned.....	2	1	0	3	0	14		2		20
Vegetables, Dried.....	1	0	0	2	0	0		2		3
Vegetables, Fresh.....	0	0	0	4	0	0	3			4
Vinegar.....	13	41	0	0	0	13	5	12		67
Water.....	0	0	0	0	0	0				
Miscellaneous.....	27	1	0	31	52	7	20	25	10	118
Grand Totals.....	1,464	1,719	58	773	2,823	1,882	*318	*788	*10	8,719

\* These totals are not included in the right hand column.

TABLE 6

(Food and Drug Divisions)

## DRUGS EXAMINED

FROM: APRIL 1ST, 1952 TO MARCH 31ST, 1953

Laboratory	Domestic	Imports	Total	Passed by Inspectors at Customs	Grand Total	Adulterated	Misbranded	Other Infractions
Halifax.....	385	997	1,382	3,755	5,137	39	845	70
Montreal.....	804	2,123	2,927	12,663	15,590	124	989	.....
Ottawa.....	826	25	851	142	993	197	359	11
Toronto.....	523	1,820	2,343	16,092	18,435	73	1,029	268
Winnipeg.....	249	1,155	1,404	6,392	7,796	111	663	268
Vancouver.....	1,294	940	2,234	3,349	5,583	60	304	779
Totals.....	4,081	7,060	11,141	42,393	53,534	604	4,189	1,396

TABLE 7

## INDIAN HEALTH SERVICES

1952 Admission and Patient Day Rates per 1,000 Population. Average Stay of Separations, and Patient Days Per Capita For Departmental and Non-Departmental Facilities

	Total	Tuberculosis	Mental
New Admissions.....	2,691	2,602	89
Native Population (1949).....	145,945	145,945	145,945
New Admissions per 1,000.....	18.4	17.8	.6
Total Patient Days.....	1,167,180	1,065,090	102,090
Patient Days per 1,000 Population.....	7,997	7,298	699
Discharges.....	2,487	2,430	57
Transfers Out.....	604	596	8
Deaths.....	210	199	11
Total Separations.....	3,301	3,225	76
Average Stay of Separations.....	353.6	330.2	1,343.2
Patient Days Per Capita.....	8.0	7.3	.7

TABLE 8

## INDIAN HEALTH SERVICES

Eskimo, 1952 Admission and Patient Day Rates per 1,000 Population. Average Stay of Separations, and Patient Days Per Capita For Departmental and Non-Departmental Facilities

	Totals	General cases	Tuberculosis cases	Mental cases
New Admissions.....	545	347	191	7
Eskimo Population (1949).....	9,302	9,302	9,302	9,302
New Admissions per 1,000 Population.....	59	37	21	1
Total Patient Days.....	124,972	13,283	107,833	3,856
Patient Days per 1,000 Population.....	13,434	1,428	11,592	414
Discharges.....	458	311	144	3
Transfers Out.....	66	17	49	.....
Deaths.....	44	22	22	.....
Total Separations.....	568	350	215	3
Average Stay of Separations.....	220.0	38.0	501.5	1,285.3

TABLE 9

## INDIAN HEALTH SERVICES

Indians, 1952 Admission and Patient Day Rates per 1,000 Population  
Average Stay of Separations, and Patient Days Per Capita For Departmental  
and Non-Departmental Facilities Not Including Indians under B.C.H.I.S.

	General Cases
New Admissions.....	21,635
Indian Population (1949) Excluding B.C.....	108,707
New Admissions per 1,000 Population.....	199
Total Patient Days.....	289,248
Patient Days per 1,000 Population.....	2,661
Discharges.....	21,145
Transfers Out.....	547
Deaths.....	355
Total Separations.....	22,047
Average Stay of Separations.....	13.1
Patient Days Per Capita.....	2.7

TABLE 10

## INDIAN HEALTH SERVICE

Indians, 1952 Admission and Patient Day Rates Per 1,000 Population. Average  
Stay of Separations, and Patient Days Per Capita for Departmental  
and Non-Departmental Facilities Not Including Indians under B.C.H.I.S.

	Total	Tuberculosis	
New Admissions.....	2,493	2,411	82
Indian Population (1949).....	136,643	136,643	136,643
New Admissions per 1,000 Population.....	18.2	17.6	.6
Total Patient Days.....	1,055,491	957,257	98,234
Patient Days Per 1,000 Population.....	7,724	7,006	719
Discharges.....	2,340	2,286	54
Transfers Out.....	555	547	8
Deaths.....	188	177	11
Total Separations.....	3,083	3,010	73
Average Stay of Separations.....	342.3	318.0	1,345.7
Patient Days Per Capita.....	7.7	7.0	7.2

TABLE 11  
(Narcotic Drug Control)  
ESTIMATED CONSUMPTION OF THE MAIN NARCOTICS  
FOR THE PERIOD 1943-52, INCLUSIVE

Unit of weight—Ounce, Pure Drug

Year	Raw Opium	Medical Opium and Prepara- tions	Morphine	Heroin	Cocaine	Ethyl- morphine	Dilaudide	Papaverine	Codeine	Demerol
1943.....	3,704	5,645	4,445	811	1,623	739	12	171	21,630	.....
1944.....	3,810	7,090	3,633	740	1,480	1,458	14	280	22,241	1,042
1945.....	3,175	6,314	3,351	670	1,305	691	12	381	22,809	1,102
1946.....	3,422	4,797	3,492	1,058	1,552	1,110	22	455	36,191	2,045
1947.....	3,932	4,734	3,080	881	1,390	1,107	15	715	36,484	5,894
1948.....	2,090	6,026	3,074	995	1,407	1,032	22	1,416	39,672	5,642
1949.....	2,010	3,606	2,718	898	1,197	949	16	1,359	44,443	6,852
1950.....	2,330	5,375	2,613	1,000	1,408	1,103	16	1,632	45,532	7,270
1951.....	2,020	5,693	2,525	928	1,270	1,561	15	1,362	56,384	8,916
1952.....	2,045	5,925	2,539	776	1,340	775	20	2,046	63,345	10,087

TABLE 12  
IMPORTS OF MAIN NARCOTICS  
(NARCOTIC DRUG CONTROL)  
FOR PERIOD 1943-52 INCLUSIVE

Unit of weight—Ounce, Pure Drug

Year	Raw Opium	Medicinal Opium and Prepara- tions	Morphine	Heroin	Cocaine	Ethyl- morphine	Dilaudide	Papaverine	Codeine	Demerol	Amidone
1943.....	1,344	9,390	4,360	964	2,338	844	14	46	9,777	.....	.....
1944.....	1,056	416	5,229	468	1,233	2,131	10	354	26,149	1,121	.....
1945.....	4,000	3,842	4,791	762	361	1,195	19	571	23,122	2,085	.....
1946.....	4,000	4,614	1,181	1,020	1,797	664	23	805	35,885	5,539	.....
1947.....	3,360	6,458	1,046	906	2,169	745	18	961	36,915	9,018	.....
1948.....	3,200	3,040	3,013	1,019	943	919	26	2,809	34,058	5,175	892
1949.....	1,720	3,202	3,168	906	666	1,433	11	943	37,751	4,106	1,068
1950.....	1,609	4,000	2,337	748	1,344	1,207	21	1,292	93,269	5,480	92
1951.....	1,928	4,423	3,076	1,014	1,053	1,098	17	1,672	37,274	9,189	73
1952.....	53	5,200	1,173	991	1,122	1,403	15	1,518	58,098	12,343	329

TABLE 13  
(NARCOTIC DRUG CONTROL)  
CONVICTIONS UNDER THE OPIUM AND NARCOTIC DRUG ACT  
FOR THE JUDICIAL YEAR ENDED SEPTEMBER 30, 1952

PROVINCE	NATURE OF OFFENCE					DRUG INVOLVED											
	Possession of Drugs	Selling, Offering, Giving Away and Delivery	Transporting	Growing Cann. Sativa	Professional Cases Under Sect. 6 of the Act	Totals	Opium	Poppy Heads	Dicodide	Cocaine	Heroin	Marhuana	Demerol	Alleged Drug	Morphine	Codeine	Totals
Newfoundland																	
Prince Edward Island																	
Nova Scotia																	
New Brunswick																	
Quebec	31	2				33	1				24	1	2		5		33
Ontario	60	1				61			1		52	1	1		5	1	61
Manitoba	17					17					16				1		17
Saskatchewan	1					1							1				1
Alberta	16	1				17		4		5	7				1		17
British Columbia	225	17				242		2			237	1		1	1		242
Totals	350	21				371	1	6	1	5	336	3	4	1	13	1	371

TABLE 14

(Quarantine Service)

## SHIPS BOARDED BY QUARANTINE OFFICERS, 1952-53

The following table indicates the number of ships boarded during the fiscal year 1952-53, also total personnel on board, divided into their respective groups

PERSONNEL INSPECTED								
Station	Vessels Inspected	Passengers				Crews	Cattlemen Stowaways, Distressed Seamen, etc.	Port Totals
		First Class	Cabin and Second Class	Tourist Third	Third Class and Steerage			
Halifax, N.S.....	661	9,885	9,332	114,939	4,126	74,663	7	212,952
Saint John, N.B.....	375	775	796	3,936	11	17,718	23	23,259
Quebec, P.Q.....	1,610	28,747	595	52,293	7,529	94,672	55	183,891
William Head, B.C.....	642	1,520	2,527	105	1,278	27,746	35	33,211
Totals.....	3,288	40,927	13,250	171,273	12,944	214,799	120	453,313

TABLE 15  
(Quarantine Service)

CONTROL OF RATS ON VESSELS  
1952-53

Port	Vessels inspected, and fumigated and deratization certificates issued	Vessels inspected and exemption certificates issued	Vessels inspected and remanded or time extended	Vessels inspected and certificates endorsed	Total Vessels Inspected	Rodents Recovered	
						Rats	Mice
Halifax, N.S.	8	44	88		140	15	
Sydney, N.S.		10			10		
Saint John, N.B.		18	10	1	29		
Quebec, P.Q.	3	12	1		16		
Port Alfred, P.Q.		32			32		
Trois-Rivières, P.Q.		9			9		
Sorel, P.Q.		3			3		
Montreal, P.Q.	4	94	8	19	125	18	89
Vancouver, B.C.	37	103	32	234	406	46	2
Victoria, B.C.		25	3	89	117		
Port Alberni, B.C.		2		10	12		
Totals.....	52	352	142	353	899	79	91

TABLE 16

(Immigration Medical Service)

## SUMMARY OF ACTIVITIES

FISCAL YEAR 1952-53

## CANADA:

Immigrants medically inspected on arrival at ocean and air ports.....	134,748
Non-immigrants medically inspected on arrival at ocean and air ports.....	24,852
Certified as "prohibited" under Immigration Act, Section 3, (a), (b), (k) and (l)...	47
Certified as physically defective, Section 3 (c).....	319

## OVERSEAS—(United Kingdom, Continent of Europe and Orient)

Prospective emigrants medically examined.....	163,757
Certified as "prohibited" under Immigration Act Section 3, (a), (b), (k) and (l)...	2,258
Certified as physically defective, Sec. 3 (c).....	14,277
Re-examinations.....	37,895

*United Kingdom:*

Prospective emigrants medically examined.....	61,438
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*Continent of Europe:*

Prospective emigrants medically examined.....	98,543
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*Orient:*

Prospective emigrants medically examined.....	3,776
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## DETAILS OF EXAMINATIONS

## EXAMINATIONS OVERSEAS:

	Examinations	Re-examinations
By Canadian Medical Officers in British Isles.....	52,083	9,650
By Roster Doctors in British Isles.....	9,355	1,094
By Canadian Medical Officers on the Continent.....	93,197	25,895
By Roster Doctors on the Continent.....	5,346	1,256
By Roster Doctors in the Orient.....	3,776	.....
Total, 1952-53.....	163,757	37,895
Total, 1951-52.....	303,467	27,832

(Table 16 continued on Page 123).

(Table 16 continued)

## DETAILS OF EXAMINATIONS

## EXAMINATIONS OVERSEAS:

	Examinations	Re-examinations
By Canadian Medical Officers in London.....	23,810	3,144
" " " " in Liverpool.....	12,710	2,579
" " " " in Glasgow.....	9,964	2,883
" " " " in Belfast.....	5,599	1,044
" " " " in Paris.....	6,351	1,221
" " " " in Brussels.....	2,322	1,469
" " " " in The Hague.....	23,709	5,323
" " " " in Copenhagen.....	2,048	445
" " " " in Stockholm.....	580	172
" " " " in Helsinki.....	527	236
" " " " in Karlsruhe.....	15,734	2,723
" " " " in Hannover.....	11,648	2,249
" " " " in Bremen.....	5,018	536
" " " " in Linz.....	6,287	1,187
" " " " in Rome.....	16,778	10,158
" " " " in Athens.....	2,195	176
By Roster Doctors, in British Isles.....	9,355	1,094
" " " " on Continent.....	5,346	1,256
" " " " in Pakistan.....	30	
" " " " in India.....	150	
" " " " in China.....	3,596	
Total.....	163,757	37,895

## EXAMINATIONS IN CANADA:

	Immigrants	Non-Immigrants
Gander, Newfoundland.....	5,593	4,010
St. John's, Newfoundland.....	694	298
Goose Bay, Newfoundland.....	14	360
Halifax, N.S.....	54,863	1,525
Sydney, N.S.....	139	334
North Sydney, N.S.....	4	273
Saint John, N.B.....	3,798	235
Moncton, N.B.....	10	3
Quebec, P.Q.....	45,299	8,293
Port Alfred, P.Q.....	90	32
Dorval, P.Q.....	6,115	4,722
Montreal, P.Q.....	1,814	417
Malton, Ont.....	1,099	771
Vancouver, B.C.....	1,811	989
Victoria, B.C.....	110	241
Ports (not stated).....	13,186	2,318
Other Canadian Ports.....	109	31
Totals.....	134,748	24,852

Rejections — 509

TABLE 17  
(Immigration Medical Service)  
CERTIFICATIONS UNDER SECTION 3 OF THE IMMIGRATION ACT

FISCAL YEAR 1952-53

	CANADA Ocean and Air Ports	BRITISH ISLES		CONTINENT OF EUROPE		TOTAL
		Examined by Can. M.O's	Examined by Roster Drs.	Examined by Can. M.O's	Examined by Roster Drs.	
Certified under:						
SS (a) Mental Diseases and Defects.....	14	80	12	259	6	371
SS (b) Loathsome and Contagious Diseases.....	23	457	86	1,265	54	1,885
SS (c) Physical Defects.....	319	4,069	902	8,909	397	14,596
SS (k) Constitutional Psychopathic Inferiority....	9	22	1	13	.....	45
SS (l) Chronic Alcoholism.....	1	1	1	1	.....	4
Total.....	366	4,629	1,002	10,447	457	16,901

TABLE 18

(Sick Mariners Service)

REVENUE, EXPENDITURE AND DEFICIT CLASSIFIED ACCORDING  
TO TYPE OF VESSEL

CALENDAR YEAR 1952

Classification of Vessel	Revenue	Expenditure	Deficit	Deficit Expressed as Percentage of Revenue
	\$ cts.	\$ cts.	\$ cts.	%
Foreign-going.....	294,361 15	312,732 97	18,371 82	6
Coasting.....	3,612 20	16,904 65	13,292 45	368
Fishing.....	9,847 10	177,696 96	167,849 86	1705
Government.....	1,774 46	65,319 81	63,545 35	3581
Additional expenditure not classified as to type of vessel.....		274 17	274 17	
Totals.....	309,594 91	572,928 56	263,333 65	86

TABLE 19  
(Family Allowances)  
COMPARATIVE STATEMENT OF FAMILY ALLOWANCES PAYMENTS  
BETWEEN MONTH OF MARCH 1952 AND MONTH OF MARCH 1953

PROVINCE	MONTH OF MARCH, 1952					MONTH OF MARCH, 1953				
	Families Receiving		Children Receiving			Families Receiving		Children Receiving		
	Number	Average Allow. per Family	Number	Average Allow. per Child	Amount Paid \$	Number	Average Allow. per Family	Number	Average Allow. per Child	Amount Paid \$
Newfoundland.....	52,552	17 11	150,995	5 96	899,359	53,800	17 43	157,280	5 96	937,888
Prince Edward Island.....	13,248	15 73	34,698	6 01	208,421	13,207	15 99	35,060	6 02	211,259
Nova Scotia.....	93,051	14 43	222,664	6 03	1,342,988	94,414	14 56	227,698	6 04	1,374,860
New Brunswick.....	73,167	15 99	195,355	5 99	1,169,886	74,426	16 23	201,240	6 00	1,208,117
Quebec.....	542,651	16 08	1,454,369	6 00	8,726,127	584,219	16 12	1,507,272	6 03	9,097,491
Ontario.....	651,272	12 20	1,327,304	5 98	7,944,428	681,870	12 35	1,405,125	5 99	8,423,616
Manitoba.....	110,466	12 78	235,347	6 00	1,411,512	113,329	12 93	244,376	6 00	1,465,954
Saskatchewan.....	119,006	13 64	267,625	6 06	1,628,281	120,781	13 73	272,958	6 07	1,658,346
Alberta.....	140,497	12 99	303,646	6 01	1,825,870	147,006	13 12	320,934	6 01	1,928,260
British Columbia.....	166,734	11 81	329,130	5 98	1,968,705	173,993	12 02	347,610	6 02	2,001,923
Yukon and Northwest Territories.....	4,077	13 26	9,053	5 97	54,081	4,296	13 67	9,619	6 10	58,727
National.....	1,966,721	13 82	4,530,186	6 00	27,174,658	2,041,341	13 94	4,729,172	6 02	28,456,441

TABLE 20

(Family Allowances)

## NET FAMILY ALLOWANCES PAYMENTS—COMPARISON BY FISCAL YEARS

Province	1945-46(9 mos.)	1946-47	1947-48	1948-49
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Newfoundland.....				
Prince Edward Island.....	1,618,784 00	2,192,044 00	2,456,477 00	2,295,286 00
Nova Scotia.....	9,519,446 00	13,358,417 07	14,207,957 82	14,515,131 00
New Brunswick.....	8,112,008 50	11,394,426 02	12,086,891 93	12,462,093 00
Quebec.....	57,962,066 56	82,389,966 72	87,157,243 46	89,304,108 45
Ontario.....	49,208,124 09	70,325,914 70	77,328,534 50	80,151,249 69
Manitoba.....	9,896,231 30	14,007 061 21	14,798,436 82	15,016,277 72
Saskatchewan.....	13,194,768 00	18,119,791 87	18,561,329 55	18,527,408 22
Alberta.....	12,262,073 00	17,159,488 00	18,181,662 50	18,695,325 00
British Columbia.....	10,693,139 00	15,722,045 50	18,012,188 75	19,347,836 58
Yukon and Northwest Territories.....	165,506 53	471,376 50	574,470 00	595,063 00
National.....	172,632,146 98	245,140,531 59	263,165,192 33	270,909,778 66

	1949-50	1950-51	1951-52	1952-53
	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Newfoundland.....	9,747,030 00	10,224,103 00	10,613,908 00	11,038,874 49
Prince Edward Island.....	2,411,291 00	2,467,257 00	2,495 987 00	2,522,830 00
Nova Scotia.....	15,291,614 07	15,660,003 27	15,949,540 73	16,297,169 95
New Brunswick.....	13,375,434 33	13,708,198 00	13,892,907 00	14,287,535 05
Quebec.....	95,901,763 15	99,558,247 04	102,883,811 56	107,084,124 36
Ontario.....	84,940,808 63	89,034,870 53	93,207,144 30	98,303,868 20
Manitoba.....	15,668,695 50	16,235,519 56	16,703,466 69	17,283,659 61
Saskatchewan.....	18,953,599 79	19,257,070 80	19,424,561 76	19,723,352 42
Alberta.....	19,822,386 97	20,762,273 29	21,573,429 99	22,575,583 60
British Columbia.....	20,813,661 00	21,952,569 36	23,063,642 85	24,399,858 81
Yukon and Northwest Territories.....	587,749 50	625,348 67	649,273 15	680,828 30
National.....	297,514,033 94	309,465,460 52	320,457,673 03	334,197,684 79

TABLE 21  
(Family Allowances)  
OVERPAYMENTS OF FAMILY ALLOWANCES

MARCH, 1953

(The Overpayments may have occurred at any time between July 1, 1945 and March 31, 1953)

PROVINCE	Overpayments Recoverable by Deduction		Overpayments Recoverable by Collection		Overpayments Considered Uncollectable		Total Overpayments Outstanding	
	Number of Accounts	Amount \$ cts.	Number of Accounts	Amount \$ cts.	Number of Accounts	Amount \$ cts.	Number of Accounts	Amount \$ cts.
Newfoundland.....	44	884 00	38	614 50	12	283 36	94	1,781 86
Prince Edward Island.....	15	257 00	1	5 00	2	24 00	18	286 00
Nova Scotia.....	73	1,722 00	125	2,540 75	44	1,472 50	242	5,735 25
New Brunswick.....	46	1,205 00	141	5,418 00	163	6,880 50	350	13,503 50
Quebec.....	572	36,988 00	1,283	85,632 16	1,195	99,355 28	3,050	221,976 44
Ontario.....	156	5,013 00	849	21,824 85	470	20,627 90	1,475	47,465 75
Manitoba.....	23	679 00	83	1,505 00	66	3,335 00	172	5,519 00
Saskatchewan.....	28	2,078 00	107	3,168 30	55	3,401 00	190	8,647 30
Alberta.....	70	1,780 00	127	3,355 00	97	5,509 90	294	10,644 90
British Columbia.....	139	5,858 40	98	2,957 18	157	6,565 40	394	15,380 98
Yukon and Northwest Territories.....	16	1,018 00	40	1,717 50	19	1,175 86	75	3,911 36
National.....	1,182	57,482 40	2,892	128,738 24	2,280	148,631 70	6,354	334,852 34

TABLE 22  
(Old Age Security)  
STATISTICS ON OLD AGE SECURITY

PROVINCE	A	B	C	D	E	F
	No. of pensioners in pay March, 1952	No. of pensioners in pay March, 1953	Net Payment for March, 1953 only	Total Net Payment for fiscal year ending March 31, 1953	No. of accounts paid to an administrator or trustee as of March, 1953	No. of deaths reported in March 1953
			\$	\$		
Newfoundland.....	14,177	14,792	592,600	6,995,760	106	128
Prince Edward Island.....	6,338	6,553	262,060	3,155,700	113	49
Nova Scotia.....	34,892	36,130	1,451,340	17,259,287	209	209
New Brunswick.....	24,340	25,680	1,030,730	12,254,680	401	107
Quebec.....	139,954	147,833	5,899,755	69,570,047	2,936	1,144
Ontario.....	238,925	253,954	10,174,000	120,083,015	7,940	1,800
Manitoba.....	37,826	40,489	1,621,520	19,019,900	372	470
Saskatchewan.....	37,153	40,533	1,633,680	19,037,306	1,043	299
Alberta.....	36,637	40,203	1,622,390	18,745,260	1,760	273
British Columbia.....	72,225	79,404	3,121,320	36,802,800	1,033	460
Yukon and Northwest Territories.....	406	447	18,000	217,840	6	4
Total.....	643,013	686,127	27,428,325	323,141,655	15,377	5,093

TABLE 23

(Old Age Assistance Division)

NUMBER OF RECIPIENTS, AVERAGE MONTHLY ASSISTANCE AND TOTAL  
FEDERAL PAYMENTS, UNDER THE OLD AGE ASSISTANCE ACT, BY PROVINCES  
FOR THE FISCAL YEAR 1952-53

PROVINCE	Number of Recipients	Average Monthly Assistance		Federal Payments 1952-53	
		\$	cts.	\$	cts.
Alberta.....	4,688	36	96	967,948	46
British Columbia.....	7,685	37	56	1,701,854	47
Manitoba.....	4,400	38	03	1,036,021	86
New Brunswick.....	5,371	36	83	1,113,921	31
Newfoundland.....	5,037	29	14	833,898	50
Nova Scotia.....	4,789	33	49	893,059	70
Ontario.....	20,401	36	95	4,586,572	90
Prince Edward Island.....	551	24	07	66,313	41
Quebec.....	30,490	37	59	6,927,593	20
Saskatchewan.....	4,206	36	65	997,396	06
Northwest Territories.....	57	38	68	4,257	50
Yukon Territory.....					
Total.....	87,675			19,128,837	37

TABLE 24

(Old Age Assistance Division)

NUMBER OF RECIPIENTS, AVERAGE MONTHLY ALLOWANCE, AND TOTAL  
FEDERAL PAYMENTS, UNDER THE BLIND PERSONS ACT, BY PROVINCES  
FOR THE FISCAL YEAR 1952-53

PROVINCE	Number of Recipients	Average Monthly Allowance		Federal Payments 1952-53	
		\$	cts.	\$	cts.
Alberta.....	383	38	31	133,821	88
British Columbia.....	485	39	19	162,910	06
Manitoba.....	430	39	24	153,548	81
New Brunswick.....	750	39	55	273,940	64
Newfoundland.....	336	38	88	117,936	51
Nova Scotia.....	722	38	54	253,717	72
Ontario.....	1,751	38	87	632,328	83
Prince Edward Island.....	79	37	83	26,680	54
Quebec.....	3,041	39	23	1,104,179	94
Saskatchewan.....	342	39	22	123,692	07
Northwest Territories.....	11	40	00	1,740	00
Yukon Territory.....	2	40	00	720	00
Total.....	8,332			2,985,217	00

TABLE 25  
(Physical Fitness)  
ASSISTANCE TO PROVINCES AND PROVINCIAL EXPENDITURES UNDER  
NATIONAL PHYSICAL FITNESS ACT, RELATING TO 1952-53

PROVINCE	Provincial Department Responsible for Administration	Date of Expiration of Current Agreement	TOTAL EXPENDITURES			PER CAPITA EXPENDITURES		
			Provincial	Federal	Total	Provincial	Federal	Total
			\$	cts.	\$	cts.	\$	cts.
Nova Scotia	Dept. of Education, Halifax	31 March, 1954	13,957 19	10,641 25 <sup>(1)</sup>	24,598 44	-0217	-0165	-0382
New Brunswick	Dept. of Education, Fredericton	31 March, 1954	16,308 30	8,540 00	24,848 30	-0316	-0165	-0481
Ontario	Department of Education, Toronto	31 March, 1954	596,022 14	76,136 50 <sup>(1)</sup>	672,158 64	-1207	-0165	-1462
Manitoba	Dept. of Health and Public Welfare, Winnipeg	31 March, 1954	15,331 02	12,859 75 <sup>(1)</sup>	28,190 77	-0197	-0165	-0362
Saskatchewan	Dept. of Education, Regina	31 March, 1953	45,840 22	13,773 50	59,613 72	-0551	-0165	-0716
Alberta	Dept. of Education, Calgary	31 March, 1954	28,284 66	15,558 30	43,843 16	-0301	-0165	-0466
British Columbia	Dept. of Education, Vancouver	31 March, 1954	124,316 60	19,296 00	144,212 60	-1072	-0165	-1237
Northwest Territories	Dept. of Resources and Development, Ottawa, Canada	31 March, 1954	29,004 94	265 00 <sup>(1)</sup>	29,265 94	1-8121	-0165	1-8286

NOTE:

(1) Claims for total grant available for 1952-53 were received too late for payment.

TABLE 26

(Physical Fitness Division)

## SUMMARY OF ALLOTMENTS AND EXPENDITURES PHYSICAL FITNESS DIVISION FOR THE FISCAL YEAR 1952-53

## ADMINISTRATION

	PHYSICAL FITNESS DIV. APPROPRIATION	NAT. FITNESS FUND
Balance from fiscal year 1951-52.....		\$ 33,664 76
Parliamentary Appropriations 1952-53.....	\$ 65,540 00.	
<b>EXPENDITURES—1952-53</b>		
Total Salaries.....	\$ 26,388 21	
Professional and Special Services.....	141 00.	\$ 17,050 00
Travelling Expenses—Staff.....	2,463 50.	
Freight, Express and Cartage.....	360 01.	
Postage.....	70 90.	
Telephones and Telegrams.....	1,242 18.	
Printing of Educational, Informational and Other Publications.....	1,583 61.	1,412 10
Educational and Informational Material Other than Publications.....	2,380 67.	8,808 47
Office Stationery, Supplies and Equipment.....	1,682 94.	372 75
Travelling Expenses—Council Members and Others.....	4,000 00.	4,303 53
Sundries.....	232 43	200 47
Balance at end of fiscal year 1952-53.....	24,994 55.	\$32,147 32
		1,517 44

## ASSISTANCE TO PROVINCES

Balance from fiscal year 1951-52.....		\$ 105,165 39
Parliamentary Appropriations 1952-53.....		146,100 00
Total funds available for grant purposes.....		251,265 39
<b>EXPENDITURES—1952-53</b>		
Nova Scotia.....	\$	10,940 57
New Brunswick.....		8,540 00
Ontario.....		74,063 25
Manitoba.....		13,125 96
Saskatchewan.....		13,773 50
Alberta.....		15,558 50
British Columbia.....		19,296 25
Northwest Territories.....		234 00
Balance at end of fiscal year 1952-53.....	\$ 24,994 55	155,532 03
		\$ 95,733 36

## SUMMARY OF FINANCIAL ASSISTANCE TO PROVINCES—NATIONAL PHYSICAL FITNESS ACT

TABLE 27  
(Physical Fitness)

	Amount of Matching Grant Annually based on 1951 census (b)	Amount Paid in Fiscal Year (a)										Total Payments
		1944-45	1945-46	1946-47	1947-48	1948-49	1949-50	1950-51	1951-52	1952-53	1944-1953	
—	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Prince Edward Island (d).....	1,630 00			2,635 49 <sup>(1)</sup>		4,184 75 <sup>(1)</sup>	1,858 50	1,858 50	1,858 50		12,395 74	
Nova Scotia.....	10,641 25	7,418 43	6,747 50	12,436 48	8,655 40	14,001 98	11,426 92	10,415 36	9,260 69	10,641 25	91,383 30	
New Brunswick.....	8,540 00				2,186 85	6,280 65	8,943 75	6,771 84	8,412 32	299 32 <sup>(1)</sup>	41,135 42	
Quebec (d).....	67,163 25											
Ontario.....	76,136 50							74,063 25 <sup>(1)</sup>	74,063 25 <sup>(1)</sup>	74,063 25 <sup>(1)</sup>	222,189 75	
Manitoba.....	12,559 75		2,692 44 <sup>(1)</sup>	7,484 92 <sup>(1)</sup>	7,933 66 <sup>(1)</sup>	5,907 84 <sup>(1)</sup>	7,237 93 <sup>(1)</sup>	8,250 97 <sup>(1)</sup>	9,573 45 <sup>(1)</sup>	13,125 96 <sup>(1)</sup>	62,297 17	
Saskatchewan.....	13,775 50		17,044 68 <sup>(1)</sup>	17,545 75 <sup>(1)</sup>	35,091 50 <sup>(1)</sup>	17,520 75	17,520 75	17,520 75	17,520 75	13,773 50	153,538 40	
Alberta.....	15,555 50		23,070 53 <sup>(1)</sup>	15,515 61	19,488 12	14,671 79	16,463 71	15,567 75	15,567 75	15,558 30	135,993 76	
British Columbia.....	19,296 25	16,015 75		32,031 50 <sup>(1)</sup>	16,015 75	15,993 00	15,993 00	15,993 00	15,993 00	19,296 25	147,331 25	
Northwest Territories.....	205 00				234 00	234 00	234 00	234 00		234 00 <sup>(1)</sup>	1,170 00	
Yukon (d).....	150 75											
Newfoundland (d).....	5,955 25											
Totals.....	232,000 00(b)	23,434 18	49,555 12	57,699 75	\$9,635 29	78,884 76	79,675 56	150,675 42	152,249 71	155,532 03	897,344 82	

(a) The amount paid to the province in any one fiscal year does not necessarily concide with the amount available to it in that year, as payments in respect of previous years may be included.  
 (b) Initially, the sum of \$225,000.00 was pro-rated for nine provinces. Later when the Northwest Territories entered into an agreement, the amounts were re-calculated on the basis of nine provinces and two territories. When Newfoundland entered confederation, an additional \$7,000.00 was made available for that province. In 1952, the re-calculations were based on the 1951 census and \$232,000.00.

(c) During 1947-50 as agreements were renewed, the periods of agreement were changed to coincide with the fiscal year. This necessitated making agreements for periods other than twelve months in some cases.

(d) These provinces do not participate at the present time.

(e) Payment for claim of previous fiscal year.

(f) Claim for 1952-53 not received prior to April 30, 1953.

# DEPARTMENT OF NATIONAL HEALTH AND WELFARE

## MINISTER

HONOURABLE PAUL MARTIN, Q.C., M.P., LL.M., LL.D.

Deputy Minister of National Health and Welfare (Health)

G. D. W. Cameron, M.D., C.M., D.P.H., LL.D.

Deputy Minister of National Health and Welfare (Welfare)

G. F. Davidson, B.A., M.A., Ph.D.

## HEALTH BRANCH

### HEALTH DIRECTORATES:

FOOD AND DRUG DIVISIONS—*Director*, C. A. Morrell, M.A., Ph.D., F.R.S.C.

*Laboratory Services, Chief*, L. I. Pugsley, B.A., M.Sc., Ph.D.

*Inspection Services, Chief*, W. A. Crandall, B.A., M.Sc.

*Proprietary or Patent Medicine Division, Chief*, Paul Soucy, Phm.B.

HEALTH INSURANCE STUDIES—*Director*, F. W. Jackson, M.D., D.P.H.

*Assistant Directors*, G. E. Wride, M.D., D.P.H., O. Leroux, M.D.

INDIAN HEALTH SERVICES—*Director*, P. E. Moore, M.D., D.P.H.

*Associate Director*, H. A. Proctor, M.D.

*Assistant Director*, W. B. Brittain, B.Sc.

**HEALTH SERVICES:** *Director*, H. A. Ansley, M.D., D.P.H.

ENVIRONMENTAL HEALTH AND SPECIAL PROJECTS

*Principal Medical Officer*, K. C. Charron, M.D.

*Occupational Health Division, A/Chief*, E. A. Watkinson, M.D., C.M., D.P.H.

*Public Health Engineering Division, Chief*, J. R. Menzies, B.A.Sc., O.L.S., C.E.

MEDICAL ADVISORY SERVICES, *Principal Medical Officer*, R. G. Ratz, M.B.

*Blindness Control Division, Chief*, J. H. Grove, M.D.

*Civil Aviation Medicine Division, Chief*, W. A. Prowse, M.D., C.M., D.P.H.

*Civil Service Health Division, A/Chief*, E. L. Davey, M.D., D.P.H.

*Hospital Design Division, Chief*, H. G. Hughes, B.Arch., A.R.I.B.A., M.R.A.I.C.

*Narcotic Control Division, Chief*, K. C. Hossick.

*Quarantine, Immigration Medical and Sick Mariners Services, Chief*,  
H. D. Reid, M.D.

RESEARCH DEVELOPMENT, *Principal Medical Officer*, B. D. B. Layton, M.D.,  
M.P.H.

*Child and Maternal Health Division, A/Chief*, Jean F. Webb, B.Sc., M.D.,  
D.P.H.

*Dental Health Division, Chief*, H. K. Brown, D.D.S., D.D.P.H.

*Epidemiology Division, Chief*, A. F. W. Peart, M.B.E., M.D., C.M., D.P.H.

*Laboratory of Hygiene, Chief*, J. Gibbard, B.S.A., S.M., F.R.S.C.

*Mental Health Division, Chief*, C. A. Roberts, M.D., C.M., L.M.C.C.

*Nutrition Division, Chief*, L. B. Pett, B.S.A., M.A., Ph.D., M.D., C.P.H.

## WELFARE BRANCH

*Executive Assistant (Welfare)* Mrs. D. B. Sinclair, O.B.E., B.A., M.A., LL.D., D.Sc. Soc.

FAMILY ALLOWANCES AND OLD AGE SECURITY, National Director,  
R. B. Curry, B.A., LL.B.

OLD AGE ASSISTANCE AND ALLOWANCES FOR BLIND PERSONS,  
*Director*, J. W. MacFarlane

PHYSICAL FITNESS DIVISION, *Assistant Director*, Doris W. Plewes, M.A., B. Paed., Ed. D.

## CIVIL DEFENCE

*Co-ordinator*, Maj. Gen. F. F. Worthington, C.B., M.C., M.M. (and Bar).

*Deputy Co-ordinator and Director of Operations and Training*, J. C. Jefferson, C.B., D.S.O. (and Bar), E.D.

*Chief Administrative Officer*, M. P. Cawdron, M.A., B.Sc.

## ADMINISTRATIVE SERVICES

SECRETARY'S DIVISION, *Departmental Secretary*, Miss O. J. Waters

INFORMATION SERVICES DIVISION, *A/Director*, Dan Wallace, M.A.

LEGAL DIVISION, *Legal Adviser*, R. E. Curran, Q.C., B.A., LL.B.

LIBRARY, *Departmental Librarian*, Miss M. D. Morton, B.H.Sc., B.L.S.

PERSONNEL DIVISION, *Chief*, H. S. Hodgins, M.B.E., B.A.

PURCHASING AND SUPPLY DIVISION, *Chief*, J. A. Hickson

RESEARCH DIVISION, *Chief*, J. W. Willard, M.A., M.P.A., A.M.

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TRANSLATION OFFICE

*Chief*, G. A. Sauve

TREASURY OFFICE,

*Chief Treasury Officer*,  
T. F. Phillips

**DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS****ADMINISTRATIVE OFFICES****OTTAWA**

Jackson Building, Bank Street  
 Birks Building, Sparks Street  
 Booth Building, Sparks Street  
 No. 3 Temporary Building, Wellington Street  
 Trafalgar Building, Queen Street

**CIVIL DEFENCE COLLEGE**

OTTAWA—No. 7 Temporary Building, Green Island.

**FAMILY ALLOWANCES AND OLD AGE SECURITY**

ST. JOHN'S, Nfld. .... 29 Buckmasters' Field  
 CHARLOTTETOWN, P.E.I. .... 59 Queen Street  
 HALIFAX, N.S. .... Industrial Building  
 FREDERICTON, N.B. .... Federal Building  
 QUEBEC, Que. .... 51 Boulevard des Capucins  
 TORONTO, Ont. .... 122 Front Street West  
 WINNIPEG, Man. .... Lindsay Building  
 REGINA, Sask. .... Dominion Government Building  
 EDMONTON, Alta. .... 10182 103rd Street  
 VICTORIA, B.C. .... Federal Building

**FOOD AND DRUG LABORATORIES**

OTTAWA, Ont. .... 35 John Street  
 HALIFAX, N.S. .... Dominion Public Building  
 MONTREAL, Que. .... 379 Common Street  
 TORONTO, Ont. .... 65 Victoria Street  
 WINNIPEG, Man. .... Aragon Building  
 VANCOUVER, B.C. .... Federal Building

**FOOD AND DRUG OFFICES**

OTTAWA, Ont. .... 35 John Street  
 HALIFAX, N.S. .... Dominion Public Building  
 CHARLOTTETOWN, P.E.I. .... 100 Fitzroy Street  
 SAINT JOHN, N.B. .... 250 Prince William Street  
 SYDNEY, N.S. .... Naval Administration Building  
 ST. JOHN'S, Nfld. .... T.A. & B. Society Building  
 QUEBEC, Que. .... 81 Dorchester Street, St. Roch  
 THREE RIVERS, Que. .... Post Office Building  
 SHERBROOKE, Que. .... Whiting Block  
 MONTREAL, Que. .... 379 Common Street  
 TORONTO, Ont. .... 59-65 Victoria Street  
 BELLEVILLE, Ont. .... 18 Bridge Street  
 HAMILTON, Ont. .... Lister Building  
 KITCHENER, Ont. .... Dominion Public Building  
 LONDON, Ont. .... Dominion Public Building  
 WINDSOR, Ont. .... Laing Building  
 SUDBURY, Ont. .... Federal Building  
 FORT WILLIAM, Ont. .... Customs Building

**FOOD AND DRUG OFFICES—*Conc.***

WINNIPEG, Man. ....	Aragon Building
BRANDON, Man. ....	Customs Building
SASKATOON, Sask. ....	215 Second Avenue South
REGINA, Sask. ....	McCallum Hill Building
CALGARY, Alta. ....	Customs Building
EDMONTON, Alta. ....	Post Office Building
KAMLOOPS, B.C. ....	345 Victoria Street
VANCOUVER, B.C. ....	Federal Building
VICTORIA, B.C. ....	816 Government Street

**INDIAN HEALTH SERVICES****Hospitals**

PRINCE RUPERT, B.C. ....	Miller Bay Indian Hospital
NANAIMO, B.C. ....	Nanaimo Indian Hospital
SARDIS, B.C. ....	Coqualeetza Indian Hospital
†CARDSTON, Alta. ....	Blood Indian Hospital
EDMONTON, Alta. ....	Charles Camsell Indian Hospital
GLEICHEN, Alta. ....	Blackfoot Indian Hospital
HOBBEEMA, Alta. ....	Hobbema Indian Hospital
FORT QU'APPELLE, Sask. ....	Fort Qu'Appelle Indian Hospital
NORTH BATTLEFORD, Sask. ....	North Battleford Indian Hospital
HODGSON, Man. ....	Fisher River Indian Hospital
PINE FALLS, Man. ....	Fort Alexander Indian Hospital
NORWAY HOUSE, Man. ....	Norway House Indian Hospital
*BRANDON, Man. ....	Brandon Indian Hospital
*SELKIRK, Man. ....	Dynevor Indian Hospital
*THE PAS, Man. ....	Clearwater Indian Hospital
MOOSE FACTORY, Ont. ....	Moose Factory Indian Hospital
OHSKEWEN, Ont. ....	Lady Willingdon Indian Hospital
SIOUX LOOKOUT, Ont. ....	Sioux Lookout Indian Hospital

**Nursing Stations**

LAKE HARBOUR, N.W.T.	NELSON HOUSE, Man.
CAPE DORSET, N.W.T.	ST. THERESA'S POINT, Man.
COPPERMINE, N.W.T.	OXFORD HOUSE, Man.
FORT McPHERSON, N.W.T.	BIG TROUT LAKE, Ont.
FORT NORMAN, N.W.T.	LAC SEUL, Ont.
BROCKET, Alta. (Peigan)	LANDSLOWNE HOUSE, Ont.
DRIFTPILE, Alta.	MANITOWANING, Ont.
MORLEY, Alta. (Stony)	OSNABURGH HOUSE, Ont.
SADDLE LAKE, Alta.	PIKANGIKUM, Ont.
LAC LA RONGE, Sask.	BERSIMIS, Que.
LEASK, Sask.	FORT CHIMO, Que.
ONION LAKE, Sask.	FORT GEORGE, Que.
CROSS LAKE, Man.	PORT HARRISON, Que.
GOD'S LAKE, Man.	RUPERT'S HOUSE, Que.
GYPSUMVILLE, Man. (Little Saskat- chewan)	ESKASONI, N.S.
ISLAND LAKE, Man.	†TOBIQUE, N.B.
	MOOSE FACTORY INDIAN HOSPITAL

† Departmental hospitals staffed by religious orders on stipend.

\* Departmental Sanatoria staffed and operated by the Sanatorium Board of Manitoba, with reimbursement on a per diem basis.

**Health Centres**

AKLAVIK, N.W.T.	PUNNICHY, Sask.
CHESTERFIELD INLET, N.W.T.	ELPHINSTONE, Man.
CORAL HARBOUR, N.W.T.	ROSSBURN, Man.
FORT RAE, N.W.T.	SANDY BAY, Man.
FORT RESOLUTION, N.W.T.	THE PAS, Man.
FORT SIMPSON, N.W.T.	WINNIPEG, Man.
PANGNIRTUNG, N.W.T.	CHAPLEAU, Ont.
WHITEHORSE, Y.T.	CHRISTIAN ISLAND, Ont.
Carmacks (seasonal)	DESERONTO, Ont.
Teslin (seasonal)	KENORA, Ont.
ALERT BAY, B.C.	MUNCEY, Ont.
BRENTWOOD, B.C.	PORT ARTHUR, Ont.
CEEPEECE, B.C.	SARNIA, Ont.
DUNCAN, B.C.	SAULT STE. MARIE, Ont.
FORT ST. JAMES, B.C.	ST. REGIS, Ont.
GREENVILLE, B.C.	WALPOLE ISLAND, Ont.
HAZELTON, B.C.	AMOS, Que.
KAMLOOPS, B.C.	Manowan (seasonal)
KINCOLITH, B.C.	Mistassini (seasonal)
LILLOOET, B.C.	Obedjiwan (seasonal)
MERRITT, B.C.	Waswanipi (seasonal)
NEW WESTMINSTER, B.C.	CAUGHNAWAGA, Que.
PORT EDWARD, B.C.	LORRETTEVILLE, Que.
PORT SIMPSON, B.C.	MANIWAKI, Que.
PRINCE RUPERT, B.C.	Rapids Lake (seasonal)
VANCOUVER, B.C.	NOTRE DAME DU NORD, Que.
VERNON, B.C.	POINTE BLEUE, Que.
WILLIAMS LAKE, B.C.	RESTIGOUCHE, Que.
CARDSTON, Alta.	SEVEN ISLANDS, Que.
CALGARY, Alta.	KINGSCLEAR, N.B.
FORT SMITH, Alta.	ROGERSVILLE, N.B.
GOOD FISH LAKE, Alta.	SHUBENACADIE, N.S.
SAINT PAUL, Alta.	SYDNEY, N.S.
PRINCE ALBERT, Sask.	LENNOX ISLAND, P.E.I.

**IMMIGRATION MEDICAL SERVICE OFFICES****Canada**

GANDER, Nfld. ....	Gander Airport.
HALIFAX, N.S. ....	Immigration Building, Pier 21.
MONCTON, N.B. ....	Moncton Airport.
MONTREAL, Que. ....	379 Common Street and Dorval Airport.
QUEBEC, Que. ....	Immigration Hospital, Quebec-West.
SAINT JOHN, N.B. ....	Pier 9, Immigration Building.
ST. JOHN'S, Nfld. ....	Marshall Building, Water Street, P.O. E5109.
STEPHENVILLE, Nfld. ....	Harmon Field Airport.
TORONTO, Ont. ....	737 Church Street and Malton Airport.
VANCOUVER, B.C. ....	Immigration Building, foot of Burrard St. and Sea Island Airport.
VICTORIA, B.C. ....	Immigration Building.

IMMIGRATION MEDICAL SERVICE OFFICES—*Cont*

## Overseas

## British Isles—

LONDON, England .....	42-46 Weymouth Street, Marylebone, W.1.
BELFAST, Northern Ireland .....	65 Chichester Street.
GLASGOW, Scotland .....	18 Woodlands Terrace, C.3.
LIVERPOOL, England .....	34 Moorfields, Lancs. 1.

## Continent—

BRUSSELS, Belgium .....	230 rue Royale.
PARIS, France .....	38 Avenue de l'Opéra.
ROME, Italy .....	Via Nemorense, 88.
THE HAGUE, Holland .....	23 Alexanderstraat.
COPENHAGEN, Denmark .....	Vestagervej 5.
STOCKHOLM, Sweden .....	Smala Grande 5.
LINZ, Austria .....	Canadian Government Immigration Mission, Promenade, 24.
KARLSRUHE, Germany (U.S. Zone) .	Canadian Government Immigration Mission, 11 Redtenbacherstrasse.
BREMEN, Germany (British Zone) ..	Canadian Government Immigration Mission, Bremer Uberseeheim, Neidersacsendamm, Bremen-Neustadt.
HANOVER, Germany (British Zone) ..	10 Kirchroederstrasse.

## SICK MARINERS CLINICS AND HOSPITALS

HALIFAX, N.S. ....	Immigration Building, Pier 21.
SYDNEY, N.S. ....	Marine Hospital.
SAINT JOHN, N.B. ....	Pier 9.
QUEBEC, Que. ....	Louise Basin.
MONTREAL, Que. ....	379 Common Street.
VANCOUVER, B.C. ....	Immigration Building.

## QUARANTINE STATIONS AND SUB-STATIONS

HALIFAX, N.S. ....	Pier 21 and Rockhead Hospital.
SAINT JOHN, N.B. ....	Pier 9 and Quarantine Hospital Lancaster, N.B.
QUEBEC, Que. ....	Louise Basin and Quarantine Hospital, Quebec-West.
MONTREAL, Que. ....	379 Common Street and Dorval Airport.
VANCOUVER, B.C. ....	Immigration Building and Sea Island Airport.
VICTORIA, B.C. ....	William Head, B.C.
GANDER, Nfld. ....	Gander Airport.
THREE RIVERS, Que. .... }	Sub-stations under direction of Quarantine Officer in Charge at Quebec. There is a Quarantine Officer appointed in each port.
SOREL, Que. .... }	
RIMOUSKI, Que. .... }	
PORT ALFRED, Que. .... }	

## LABORATORIES OF HYGIENE

OTTAWA, Ont. ....	45 Spencer Street.
KAMLOOPS, B.C. ....	

**OCCUPATIONAL HEALTH LABORATORIES**

OTTAWA, Ont. ....	200 Kent Street. Health Radiation Laboratory, Laurentian Building.
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**PUBLIC HEALTH ENGINEERING DISTRICT OFFICES**

TRURO, N.S. ....	545 Prince Street.
MONCTON, N.B. ....	General Motors Building.
MONTREAL, Que. ....	Postal Station "B", 685 Cathcart Street.
ST. CATHARINES, Ont. ....	4th Floor, Dominion Building.
PORT ARTHUR, Ont. ....	Post Office Building.
WINNIPEG, Man. ....	Scientific Building, 425½ Portage Avenue.
EDMONTON, Alta. ....	Post Office Building.
VANCOUVER, B.C. ....	Begg Building, 1110 West Georgia Street.
WILLIAM HEAD, B.C. ....	Quarantine Hospital.

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